AUDIOVISUAL INSTRUCTION

Published by the department of audiovisual instruction, NEA

language laboratory sketchbook p 201-216

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Board Chooses NAVA: The DAVI Board of Directors voted to hold its summer meeting at the Morrison Hotel in Chicago July 22 during the NAVA Convention and Exhibit. The NAVA show which will run from July 22-25 is expected to draw record attendance this year. Mahlon H. Martin, Massillon, Ohio, is general chairman.

Courtesy of Ford Foundation: The language laboratory insert on pages 200-216 was donated by Educational Facilities Laboratories whose president, Harold Gores, was one of the major speakers at Miami. Originally presented at the language laboratory conference in Purdue in April, the sketchbook found its way into AVI through the suggestion of Carolyn Whitenack, assistant professor of library-AV at Purdue. Author Brubaker is associated with Perkins and Will, school architects of Chicago.

Are You Packaging Materials? The NEA Technology Project is making a study of "packaged" materials of instruction. "Packaging" in this case means the combining of media and materials into an instructional package or system of materials to teach all or part of a course. If your school or business is packaging or plans to package materials, please contact Lee E. Campion, Associate Investigator, Technological Development Project, NEA, 1201 Sixteenth Street, N.W., Washington 6, D.C.

The Education Bill: From latest reports it looks like the federal-aid-to-education bill will be on the Senate floor about the time this issue reaches you. Debate is expected to begin in the House 10 days later. If you support this legislation--and DAVI and the NEA hope you do--you are advised to write your Senators and Congressmen referring to the bills by number (S 1021 and HR 4970) and to support the bills as they now stand. Further advice is to write "positive letters" citing definite needs and problems in your community and stating how the general education bill will help solve these problems. . . Now also is the time to act if you are interested in extension of NDEA. A bill for this purpose was introduced into the Senate April 27 by Lister Hill of Alabama (S 1726). Barry Morris represented DAVI at hearings May 12-13.

Teaching Machine Information: AID (auto-instructional devices) is a new magazine published monthly by the Institute of International Research and Development, Inc. at Lubbock, Texas. Editor is Harold Moon, the Institute's coordinator for research and development who recently left a position with Rheem Califone. AID sells for 50 cents per copy, $5 per year. Write P.O. Box 4456, Lubbock, Texas.

Co-Authors Honored at a reception at the DAVI Convention were A.J. Foy Cross and Irene F. Cypher whose book Audiovisual Education has just been announced for release this spring. 550 pages, $7.25 from Thomas Y. Crowell Company.

Announced for August is the new book by Esther L. Berg and Florence B. Freedman. Some chapter headings in the 300-page Classroom Teacher's Guide to Audiovisual Material are: Audiovisual Aids are Knocking at the Door; Why Let Them In? What Are They? How Shall I Use Them? Where Shall I Find Them? $5 from the Chilton Company, Philadelphia.

For a First-Rate Review of the controversial film "Operation Abolition" see the May ALA Bulletin, pages 424-25.

Retiring from Peerlees: Kern Moyse is retiring after 15 years as president of Peerless Film Processing Corporation and 27 years with the company. Writes Mr. Moyse: "I feel I can now withdraw, knowing that those who have been working with me for many years can and will carry on the high standards of service that Peerless, first under my father and then under me, has always strived for." Raoul J. Menendez, sales manager for many years, has been elected vice president in charge of sales promotion.

Heads Media Council: J. Edwin Foster will head the Educational Media Council as executive director with offices at 250 West 57th Street, New York. Foster comes from the American Heart Association where he established and directed a department of AV materials.

The Start of a Trend? From H.E. Thorne, president of PENNAVID comes news of this interesting development: "Final plans are underway to join PENNAVID, PAVATE, the Pennsylvania Film Librarians and the ETV group into one. The new name will be the Pennsylvania Learning Resources Association. Each group will be headed by a chairman."

Photo Credits: Page 191, Carl Purcell, NEA; page 192, Max Tharpe; page 194, courtesy Palo Alto Unified School District; art spot page 220, from Television for Children, the Foundation for Character Education, Boston, Walter Lorraine, artist; page 230, George Campbell, NEA.

PROFESSIONAL PLACEMENT

If you wish to use these columns to find employment or fill a position, please write to Robert C. Snider, Department of Audiovisual Instruction, 1201 16th Street, N.W., Washington 6, D.C. If you wish to investigate any of the opportunities listed below, address your inquiry to the assigned box number, in care of the Department of Audiovisual Instruction at the above address. Your letter must be addressed to one box number only. When it is received at DAVI headquarters your letter will be forwarded immediately to the employer or employee assigned to the box number indicated by you. Further correspondence will be directly between you and prospective employer (or employee, as the case may be).

POSITIONS

Ph.D. Candidate interested in working with testing services and as consultant in student self-instruction projects. Not teaching position. Available fall 1961, Gulf Coast. For particulars write Box No. P-19.

AV Specialist: Man or woman with good interest and background in administration of a public-school AV center. Job consists of developing a materials center to include all AV techniques ranging from individual teaching devices to UHF TV station. Candidate must be prepared to assume large share of day-to-day administrative duties. $5000-$7000, open now, New England. Box No. P-20.

AV Instructor (university level): Man or woman with doctorate to teach AV courses and one course in education. Midwest. For particulars write Box No. P-21.

Supervisor Motion Picture Production. Man with background (courses) in AV, TV, and cinema. Good experience required in all phases of motion picture production. Duties will include all aspects of motion picture production from camera man to producer. This is a new program; its development is up to successful candidate. Open July 1, $5000 minimum, Pacific Northwest. Box No. P-22.

Coordinator of Utilization Services (university level): Man or woman; bachelor's degree minimum, master's preferred. Must have minor in AV; some librarianship helpful. Should have 2 or 3 yrs experience in film library or campus AV service. TV training and experience helpful. Job entails over-all management of utilization services of AV materials library, campus operational equipment utilization services, and preview and reference service (6 full-time and approx 30 part-time employees). Open July 1, $5500-$7500, Pacific Northwest. Box No. P-23.

Supervisor Graphics Illustration (university level): Man or woman with bachelor's degree. Should have background of art, design, education, and psychology courses, with 3 or more yrs work experience as commercial, technical, or educational-materials artist and illustrator. Duties include consultation with faculty; planning and scheduling the work of two artist-illustrators; designing instructional materials; and graphics production ranging from simplest designs to exhibits. Open around August 1, $4500-$6500, Pacific Northwest. Box No. P-24.

Audiovisual Director: Man or woman with masters degree. Training background should include science teaching, radio, and photography. Experience helpful but not essential. Duties are those of AV director in large-city suburb. Potential growth within 1 yr to 5-period teaching load, AV duties 3 periods, and radio-photo, 1 or 2 periods. Open September, $5200-$9000; Midwest. Box No. P-25.

Research Assistant: Doctoral candidate (man or woman) with background in education and/or psychology. Must have some artistic ability in graphics; teaching experience also helpful. Opportunity to do thesis if degree is earned off campus; or candidate can go through entire program at university where position is located. Duties: to help conduct research on application of automated instruction techniques to pictorial presentations and productions--with particular reference to filmstrips. Open June 15 or September 1. $3600 to $4200 plus fees. Eastern University. Box No. P-26.

High School Instructional Materials Coordinator: Young man or woman with professional preparation in AV materials for small city system. No teaching duties but some teaching experience necessary. Candidate must have understanding of curriculum, AV utilization, evaluation, role of teaching materials and mechanics of their use. Should have some knowledge of graphics, production, photography, basic equipment, and general organization of instructional materials center. Salary determined by experience and preparation. Position open September. Northeast. Box No. P-27.

APPLICANTS

AV Director for Public School, College, or Industry: Man specialized in local production and utilization of instructional materials. MA degree. Experienced as AV director school district level; college teaching with rank of assistant professor; instructor Air Force Reserve. Also active statewide in citizenship education. Vice president local AV organization and co-author DAVI publication. 35, married, 2 children; $9500, available September, anywhere US. Box No. A-29.

Training Aids Specialist: Man specialized in AV and science teaching. MS education, June 1961. 3 yrs USN training aids operation, maintenance and instruction; 1½ yrs administration of university campus service and equipment repair. 29, married, 1 child; $6000-$7000, available June or August, locate anywhere. Box No. A-30.

AV Specialist with University Center: Man specialized in AV communications. Masters degree; currently completing doctorate (theory and research). Interested in teacher training. 3 yrs public school teacher; 3 yrs part-time instructor and program supervisor at university AV center. 29, married, 1 child; $7500, available February 1962, locate anywhere. Box No. A-31.

College AV Director or Training Specialist: Man specialized in elementary education will receive MS in education June 1961. 4 yrs USAF electronics; 5 yrs drafting. Vermont teaching certificate. 28, married, 2 children; salary open, available June or August, locate anywhere. Box No. A-32.

AV Position at College or State Department Level or in Industry: Man; Ed.D. with 8 yrs extension division experience as AV specialist and assistant professor. Heavy experience in workshops and public relations. Also film selection. 150 published articles; scripts for 4 educational films and 3 filmstrips under distribution by recognized film company. Adm credentials California. 40, married, 2 children; $10,000, available September, locate anywhere. Box No. A-33.

AV Director; Coordinator Instructional Materials Center; or Public Relations or Administrative Position: Man specialized in utilization and scheduling of materials and equipment; also pre-service training. M.Ed. (administration, supervision, and guidance) plus advanced graduate work in AV. 11 yrs teaching experience in general science and biology; 5 yrs guidance counselor. 35, married, 1 child; $8500, available July, prefers to locate in California. Box No. A-34.

AV Director or Director of Curriculum Materials in City System or College: Man specialized in AV and elementary education. Ed.D.; teaching experience at elementary and college level; director, campus services and AV center; also film library experience (assistant director). Publications. 35, single; $9000, available June 30 or August 15, Northeast. Box No. A-35.

College AV Position: Man specialized in AV education as administrator, instructor, and production supervisor. Masters degree. Experience includes 3 yrs as high-school instructor, 3 yrs as college instructor and department supervisor, 5 yrs education specialist US Army (GS-13). 34, married, 2 children; salary open, available within 30 days of job notification. Southeast. Box No. A-36.

Position in AV Teaching, Testing, or Motion Picture Production: Man specialized in AV theory, AV materials, motion picture production and utilization. Ph.D.; 4 yrs production experience; 7 yrs teaching at university level. Title VII research grant, Fulbright scholarship; publications. 39, married, 1 child; $9000, available June 1962. Western US. Box No. A-37.

AV Director or Coordinator: Man experienced in in-service education (including research in teaching via kinescope). MS June 1961. 2 yrs experience as high-school science and biology teacher. 27, married, 1 child; salary open, available September, Midwest. Box No. A-38.

AV Position: Mature woman with teaching background (10 yrs), audiovisual experience (3 yrs) and specialty in tape recording. Doctor of pedagogy; fluent French and Spanish; publications. Single, salary open, available June 1961. Southern US. Box No. A-39.

AV Coordinator or Librarian; Instructor in Library Science (AV Materials): Man specialized in college library and AV services; also experienced in special services and exhibits. Masters degree. 10 yrs experience as AV librarian; instructor in library science; chairman of exhibits at college library center 2 yrs; publications. 44, married, 1 child; $8500, available September, prefers Florida or New Mexico. Box No. A-40.

AV Administrator or Teacher of AV in Combination with Business Education: Man specialized in AV education and business education. MA education; 4 yrs experience as bookkeeping and typing teacher; presently teaching general business education. 9 yrs active military duty in fields of communications, intelligence, troop information and education, training military instructors, etc. Considerable experience in photography and some part-time work as radio announcer. 36, married, 1 child. Salary open, available June, any area US or abroad. Box No. A-41.

AV Coordinator or Instructor: Man specialized in education, AV, and cinema. MS education. 5 yrs elementary school teaching, 1 yr college level (AV); 1½ yrs adult education (Russian). Adult education credentials in English, Russian, and Italian. 36, 2 dependents, $8000-$9000. Available May 31, no geographical preference. Box No. A-42.

Here, with minor deletions, is the address which won acclaim for Dr. Dale in California. Delivered at a meeting of the state audiovisual association in Long Beach February 2, it was originally entitled "The Challenge of Knowledge."

In a "decisive decade" there is

Edgar Dale

NO ROOM FOR AMATEURS

IN A WORLD where knowledge is increasing astronomically, there is no longer room for the amateur teacher, amateur audiovisualist or administrator. We must be willing to say to ourselves: "Whatever I am, I am determined to achieve excellence; I am determined to be a professional."

What, then, are some of the things that this growth in knowledge impels us to do as professionals? What are we to do in school and college to meet the challenge of this overwhelming and growing body of knowledge that has been developing in so many fields—mathematics, chemistry, physics, history, and others.

In these circumstances, I believe we must face an extended and rigorous curriculum study. We must ask ourselves: What behavior—what overt and covert action—do we expect as the outcome of education in the elementary school, the high school, and the college?

Let me present an approach to teaching and learning that I have found especially useful—it is a way of rigorously studying what we are now doing. Let us suppose that each of you right now makes a written or mental chart which you divide into two parts—*imitative reaction* and *creative interaction*. As you think about yourself as a student in school and college, ask yourself to what extent your activities were those of imitative reaction and to what extent they were creative interaction.

One way of checking on our present-day curriculum is to look at the kind of tests we give. If they chiefly require memorizing what the book, film, TV program, or professor has said, the curriculum is obviously that of imitative reaction. For example, a language laboratory proceeds on the basis of imitative reaction to a model. All reactions which emphasize unreflective imitation of a model—and the model could very well be an excellent one—define what I mean by imitative reaction. On the other hand, if examinations test the ability to solve problems that have not yet been solved by the student examined nor been a model for specific imitation, then we are in the area of creativeness, thoughtfulness, judgment, and evaluation—in other words, in the area of creative interaction.

If our curriculum is chiefly one of imitative reaction, then we only imitate behavior which has already occurred, since we cannot imitate something that does not yet exist. If our curriculum is one of imitative reaction, then we will take on the cultural heritage imitatively but we will not add to it.

I am not using imitative reaction here in an unfavorable sense. Certainly our learning of the English language as children, our imitation of fine models in school and elsewhere—those of our parents, for instance—are fruitful sources of educational development.

But today's complexities of individual and social life are so great that solutions will develop only through increased emphasis on creative interaction—interaction with a person, book, broadcast, film, or event. Creative interaction looks forward. It does not reject models for imitation but aims to improve them. I am stressing the importance of creative interaction because our world is changing so fast that imitative reaction is not good enough. It chains us to the past and may not link us with the future. Imitative reaction is specified and predictable training. Creative interaction is generalized behavior for unpredictable situations. It is education.

I am sure that your minds have been running ahead and anticipating what is coming next. It obviously deals with the types of instructional materials needed in the future and the role of the teacher in the instructional plan. What follows from what I have just said?

If your aim in teaching arithmetic, botany, or the social sciences is simply to present information to be memorized (imitative reaction) then films, closed-circuit television, or programmed teaching of some kind can take over much of the job. Obviously you will reply: "Teaching is much more than presenting information to be memorized—it is carrying forward a program which will build life-long tastes and develop thinking abilities and creative skills in communication."

If this is true then it is quite clear to me that the new technological approaches to teaching and learning will confront teachers with new responsibilities. The phenomenal increase of knowledge in so many fields also puts a very heavy burden of responsibility upon those of us who are developing the school curriculum. We must identify the skills, information and competencies which we expect of nearly every child. These are the predictables and they must be nailed down. These are the aspects of the curriculum which can be programmed and taught by means of textbooks, films, filmstrips, television programs and so on.

Such materials although learned independently and

Job seekers in the 1970's—who will see that they are vocationally fit?

individually do not make the independent learner. An independent learner is not programmed by others, he programs himself. He has learned how to learn, how to solve problems and how to create a problem where none existed before.

I want to emphasize that the dependent learning (as gained through programmed teaching) must be integrated with the self-programmed, independent learning. Otherwise we shall have two curricula, not one. There must be the daily criss-crossing from programmed teaching to independent learning.

How do you develop the kind of teacher who can meet the added responsibilities of a new kind of curriculum? This is no small problem. But the heart of it lies, first, in our sensitivity to the need for developing an educational system in which the self-fulfillment of the teacher is of prime importance. The teacher's growth and the pupil's are primary, the development of a technology or system is secondary.

At the end of a talk which I recently gave on educational television an old friend came up and asked this question: "Do you believe that those who are talking about and promoting the new electronic technology in education are persons in the humanistic tradition? Are they persons who care more deeply about people than they do about machines, systems, and technologies?"

I told him that the people I knew in this field were deeply committed to human values. And then I began to wonder. I hear some people strongly advocating changes first in technology, school structure, and scheduling, with the hope that changes in methods and materials of teaching will follow.

Frankly this approach does not appeal to me. I reject it. I know the profound effect that introducing technology into a country can produce. Robert MacIver, emeritus professor of Columbia University, has noted that: "Technology is the most subtle and the most effective engineer of enduring social change. Its apparent neutrality is deceptive and often disarming."

It is precisely because the changes may be "deceptive and disarming" that we need to know what we are doing.

Out-of-School Learning

Today many students bring to school and college rich experiences gained through modern media of communication. Two or three times a week the networks carry an hour or half-hour program dealing with critical national and international problems.

There are also notable television programs on the arts. Our cities, too, are rich with cultural opportunity —art galleries, natural history museums, symphonies, and plays. Note the enhanced opportunities provided by modern libraries for reading, film viewing, and listening to records. Note, too, the low cost of excellent paperbacks.

Unfortunately we do not make adequate use of these resources. We assign outside reading but we rarely assign outside viewing. The classroom teacher can no longer remain isolated from the mainstream of important ideas found in the press, tuned in on a television program, discovered at an art exhibit. We must make a more systematic use of the educative environment outside the school.

The other day while reading some material on perception, I came upon a picture which many of you may have seen. It is a likeness of a beautiful woman in sables. But you are expected also to see in the picture an old hag. I could not do it. My perception was frozen on the woman in sables. I don't see anything Freudian in this—it was simply that I could not make the change-over. I had a frozen perception. All of us here have some frozen perceptions of the role of a teacher or professor. We also have frozen perceptions about class size, scheduling, the nature of testing, and many other aspects of education.

We must get away from the idea that the school will teach everything that is important, that there is something special about school learning, and something quite ordinary about out-of-school learning. The teacher's role will increasingly be not that of presenter of all important ideas, but as noted above, one who helps integrate, systematize, and motivate. One who helps students string the beads of experience.

We hear a good deal of discussion these days about the upper 20 percent. In our national concern with picking the winners, we are forgetting that there are losers. The losers represent the 30 to 35 percent of our

Creative Interaction?

youth who do not graduate from high school. What is likely to happen to them in this decisive decade?

Some 26 million young workers will be job seekers in these ten years—two million a year now and up to three million in 1970. This is 40 percent higher than in the 1950's. According to Sylvia Porter's column on this subject, about four percent of these 26 million will not complete grade school and about 30 percent will not finish high school. Many of these are our culturally deprived children, a million of whom are now in our 14 largest industrial cities. What will happen to them when they seek jobs? First, the jobs that they might hold are being automated out of existence. Second, these students are not getting adequate training in necessary vocational skills.

Who will befriend the lower third? Who will speak for the disadvantaged, the culturally handicapped who even under the best circumstances will learn slowly? Who will be responsible for seeing that they get the kind of fulfillment we are now so anxiously trying to provide for the upper 20 percent? If we cannot befriend these young people out of love, let us at least befriend them out of a deep concern for the continuance of our democratic societies. Remember that the culturally disadvantaged have a vote. Let us not mark them with failure by using subject-matter and methods of teaching which exclude them from the full development of their rational powers. I am convinced that to prepare the teaching materials for this group would tax our ingenuity for many years even if we had enough money, enough staff, and enough wisdom to start on it right away.

We should be putting the best educational brains of our country back of the task of developing a suitable curriculum for this group. Here, in seeing that an unusually rich school environment was developed for slow learners, we could test the great potency of audiovisual materials, of programmed teaching, and of inspired teachers. The Higher Horizons in the New York City schools is an example of a project for the abler among deprived students—but this is only a beginning.

I believe that this is a decisive decade and that as communication specialists we have an unusual opportunity and obligation ahead of us. Let me re-emphasize some of the things which we must think about:

- There are some hard jobs ahead, jobs worthy of our best professional effort. Our very physical survival may be at stake and our survival as a democracy is most certainly at stake.
- We must keep at the center of our work the humanistic tradition, the concern for the growth, maturity, and self-fulfillment of the individual. We must not in Thoreau's phrase use "improved means for unimproved ends." We don't want the teacher to become a mechanical maid to a mechanical aid.
- Technology produces "deceptive and disarming" changes. Many of these changes will be beneficial; some harmful. We ought to have enough sense to distinguish between the two. We must learn to tell the difference between rhetoric and research.
- All courses of study will contain elements of imitative reaction, but we must move beyond training which has a ceiling, to education which has no boundaries. An educated man is one who has been nurtured on creative interaction, critical thinking, and on probing issues and problems which develop rational powers.
- The goal of the school and college is that of developing the independent learner, the self-starter, the person who has the mood and the method to go it alone, one who has attained maturity through self-education.
- We need a new image of the classroom teacher. His role will diminish as a presenter of information and will sharply increase as a motivator, an organizer and guide of pupil experiences coming from many sources. These experiences are gained through newspapers, magazines, broadcasting, exhibits, museums, and travel, in addition to the experiences gained through life in the family and with friends.
- It is likely that we shall think less stereotypically about class size. We shall put more focus on the individual as a learner and let him proceed more often at his own speed. The larger group will obviously be used as a vehicle for learning because of the dynamics in the group. We must remember, too, that many jobs are done with and through a group. We might well remember the warning that when a class gets too big you teach what you know and not what you are.

Finally, we are living in a time of great social change, a time when all of us can be challenged by this tremendous growth in knowledge. All of us must accept the individual and group responsibility for making the needed educational changes so that our free, flexible, democratic society can flourish.

It would be fortunate indeed if we could say what Virgil had Aeneas say:

Many of these things I saw
And some of them I was

(Book II *Aeneid*, line 5 and 6)

THE AUDIOVISUAL CHALLENGE to the industry and to the profession

Major General J. B. Medaris, U. S. Army (Ret.)

Some pertinent remarks from General Medaris' address to the NAVA Convention in Dallas, January 13. Original title: "Communication in the Space Age."

THE OLDER I get the more I appreciate the wisdom of Thomas Jefferson. He understood that the success of this great experiment in self-government hinges on the general education of the citizenry. Jefferson could not have foreseen our struggle with Communism, but he did understand an eternal verity. "If a nation expects to be ignorant and free," he said, "it expects what never was and never will be."

Jefferson listed six objectives of education that are classically timeless. The first, he said, is to give every citizen the information he needs to transact his own business; the second is to enable him to calculate for himself and to express and preserve his ideas, contracts, and accounts in writing; the third, to improve, by reading, his faculties and morals; the fourth, to understand his duties to his neighbors and his country and to discharge with competence the functions confided to him by either; the fifth, to know his rights, to exercise with order and justice those rights he retains, to choose with discretion the fiduciary of those he delegates, and to notice their conduct with diligence, candor and judgment; and finally, to observe with intelligence all the social relations under which he shall be placed.

Now let me tell you something that causes me great concern. When I look at an audiovisual device and undertake to evaluate it I try to bring into play the standards I have been talking about. Let me show you what I mean: Let's suppose that you and I are two school teachers being approached by an audiovisualist with a new teaching device. Let's also suppose that we are good teachers—aware of the need for more productive education in the Age of Space—adherents to the Jeffersonian principle that education is the key to survival—eager to explore any possibility of doing our jobs better. What do you suppose our reaction is going to be if that new device is compounded of 99 percent useless gadgetry and chrome? And is priced out of all reasonable relation to the job it can actually do? And related only remotely to increasing efficiency of education? If we are worth our professional salt as teachers we will send that audiovisualist and his chrome-plated jigsaw puzzle back to selling can openers door to door.

In my mind, rationality and morality in this or any other industry are inseparable. I firmly believe that we will meet our responsibility precisely to the degree that we put service above profit, and that profit will come in precise relation to the service we render. If you disagree with this philosophy I believe you will fail, but I am concerned lest in your failure you inflict damage on the audiovisual profession by diminishing the general acceptance of its technology.

There is a second problem related to this subject. It is this: Any approach to the application of communications technology to education is unfortunate and erroneous if it aims at or accidentally results in reducing the role of the teacher. There is no substitute for the teacher. The ultimate in forceful, effective communication will always be that push-buttonless give-and-take between two human beings.

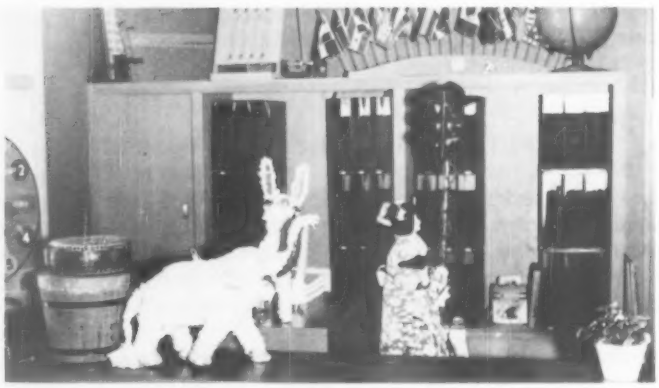
I would define our role thus: The audiovisualist is concerned with applying communications technology to the teaching process for the purpose of improving education. For our purposes, education can be considered in two parts. One part of education involves the communication of information from a teaching source to the student. This—at least relatively—is a mechanical training function and can be made more efficient by technology. But this part of education must always be subservient to the second part which is the assimilation and use of knowledge by the student, under day-to-day, first-hand guidance by the teacher. As long as we understand this limitation of technology and as long as we help free the teacher from the more mechanical chores of his job, we can be assured of his faith in what we are trying to do.

Having earned the confidence of the teacher, we can then proceed with him to a solution of what I choose to call the functional problems of the audiovisual field. In this area we are concerned that the audiovisual tool be utilized to its absolute maximum. Not long ago I looked over an industrial training program that purported to teach with modern audiovisual techniques. There was no question about the substance of the course. The facts that were to be communicated were solid and logical and perfectly acceptable. The devices to be used were of top quality, efficient in every respect. But in the course of evaluating this program it occurred to me that here was a classic example of how audiovisuals should not be used. The pedagogy of the program was as stale as yesterday's news. The audiovisual aspect was not integrated into the pedagogy; it was simply used as a crutch, not a tool. The techniques were not used to "communicate with illustration" but to "illustrate communication."

We need to look at the communication of fact to the consciousness of the student as a specialized job. It must be done quickly and accurately. When the tools for this process have been devised, the technique for using these tools must be derived from the tools themselves. Simply translating obsolete methodology into audiovisual terms will not do the job. There is nothing revolutionary in deriving a productive process from the character of one's resources. In military terms it means taking advantage of the terrain. In manufacturing terms it means planning production so that maximum output is squeezed from every machine. In education it means acceptance that technology can and should influence the evolution of modern pedagogy.

IS THE INSTRUCTIONAL MATERIALS CENTER THE ANSWER?

Albert L. Goldberg and Richard A. Darling



The Murray Phillips article printed in December engendered more comment than AVI has seen in a long time. In Livonia, Michigan, it stimulated the thinking expressed on these pages. Dr. Goldberg, coordinator of instructional materials, was on leave last year with the System Development Corporation. Dr. Darling, coordinator of library services, was 1959 winner of the ALA Dutton McRae Award for "promoting library work with children and young people."

THE PERVASIVE NATURE of the "age of technology" is as easy to observe in our educational life as is the dynamic nature of the "new frontier" on the political front. The question common to both aspects of our national existence may be: "Where are we going?" "Who's in charge?" "How fast are we moving?" and "How can I play a part?" Ere the momentum carry us faster than we can travel or farther than we care to go, certain assessments at this juncture appear crucial.

It would seem important to the assessment process to probe further into the article by Murray Phillips in the December 1960 issue of AUDIOVISUAL INSTRUCTION wherein he defines the instructional materials center. ("Instructional Materials Centers: The Rationale," pages 326-27.) Our assessment is also concerned with definition, with practical operational factors, and in addition, with perhaps the ultimate focus of the materials function in the scheme of curricular decision making. We look with hope to the current project of DAVI for considerable guidance in the last instance, realizing that answers do not come rapidly. In the meantime we recognize that school is in session and there is learning going on inside (and outside) its walls. Assessment and redirection cannot wait long.

Highly visible attributes of the instructional materials center are its familiarity with materials and devices and its attention to educational facilities. From the "age of technology" we have benefited from "things" which both excite and plague the administrator, teacher, and learner. The speed with which some administrators have seized upon new ideas and new "hardware" is encouraging, yet frightening. Effective implementation, imaginative applications, personnel, budget, space, inservice training—these and all other obligations which educational leadership incurs during an operational change-over require careful pre-planning. Yet in many cases they seem to be left to afterthought —and possibly "after regret."

Administrators, apprehensive lest the community feel that they are not abreast of the newer educational developments, grasp the highly visible as a sure road to success. "If we have the latest electronic device," they seem to say, "no one can doubt that our children are getting the best of quality education. Let us throw together all the departments that have to do with instructional materials—the library, the audiovisual center, television education, language laboratories, and the teaching devices."

Nor do they stop at this point. A computer is an instructional device, as is a microscope.

It may well be that, as Phillips has suggested, such a variety of materials should be brought together in resource centers with content areas serving as cores. But rushing into the instructional materials center by lumping together every instructional tool, is not, as many educators piously hope, guaranteed to bring an educational millenium.

Dr. Phillips suggests the objections to the thoroughgoing instructional materials center ably enough. But his interpretation of motives is, at least, open to question. Librarians and audiovisualists often feel, no doubt, that their services may be more effective if separate. Neither do they fail to recognize that for a particular type of service there are disadvantages to the user in finding all "things" together. If the service is to be a static one, one in which things are "checked out" to people, a basically mechanical, record-keeping kind of service, then all things should be combined, even including scratch-pads, time-honored materials of instruction.

Before committing ourselves entirely to perdition, let us admit that a certain amount of this type of service is necessary. Books, films, filmstrips, recordings, and so forth, need to be checked out. But we should not delude ourselves. We are giving library and audiovisual service, to be sure. But the only thing untraditional about this service is that it is in one center. Whether we have one specialist or a team is really irrelevant. What is needed is a more dynamic response which, in sum, will bring about a program of materials and devices bearing on the education of our youngsters, an instructional materials rationale that is education-centered, not facility nor device-centered. Have the audiovisualists, those who should be in the forefront of an "age of technology" become the victims of a fallacy that long plagued the librarians, and unfortunately, still does? Has the audiovisualist and even the television director become a keeper of things instead of a purveyor of ideas and skills for the improvement of instruction?

"Who shall be in charge?" is, we are told, the basic bugaooo that is raised. There is a danger, it is claimed, that the specialty possessed by any chief will be emphasized to the disadvantage of those areas not covered by his specialty. But this is not the real danger. Whether they have expressed it or not, what the librarians and audiovisual directors fear is not that they will be neglected. Rather, they recognize that in a world of ever greater specialization, where they must work with devices and machines, and even book collections of increasing complexity, no one of them is capable of being head of such a center in any dynamic manner. The only person we can put in that position at the moment is an administrator, and he can be depended upon only for a perfunctory tradition-oriented kind of leadership. With him we will have a static instructional materials operation. Without him we may have a hydra-headed monster which not even a Hercules could slay.

Quick Recipe for Leaders

It is easy enough to suggest that our teacher education institutions provide us with the kind of leaders we need. Let us educate directors of instructional materials who can be jacks-of-all-trades in the world of instructional materials. They can plan curricula that will give us the men we need. All that is required, surely, is to add a few more courses, cross-list a few others, provide the whole with an attractive title, and our problems will be solved. This is precisely what a few of our institutions have done. A little library science, some training in the operation of projectors, a brace of courses in radio and television production—there we have the makings of an instructional materials specialist, an educational jack-of-all-trades.

But let us not forget what a jack-of-all-trades is. In village life, from which the term derives, he was the man who was generally handy at anything. He could harness a team; he could shoe a horse, or a man if the need arose. He could mend a wheel, and even serve as a carpenter passably well. Where is he today? He has either become a specialist or he is unemployed.

If we are going to approach educational problems with a systems concept or concepts, the specialist will find his role spelled out by the goals to be accomplished by the system. Logically, the only meaningful frame of reference for both the specialist and the materials and devices themselves is that provided by the curriculum, and by the unique patterns of teaching which prevail locally. While the instructional materials center can be viewed as a sub-system, it is a part of the overall systematic operation of curriculum development, and thus subordinated to it. Though curriculum may develop through centralized action with the school unit, its implementation is a decentralized activity. To both the development and implementation phases the materials specialists bring their tools, skills, special knowledge and insight. Though the specialists should participate in curriculum development, the materials and devices themselves, as a part of curriculum implementation, can be decentralized. Viewed this way, the facility of the instructional materials center is not a primary concern.

The primary element in the rationale is the educational functions performed by materials and devices. The continuous reassessment of the curriculum, an obligation which is inherent in the employment of a systems concept, demands the same action regarding the materials function, and indeed may lead to redirection of it. An integral part of the assessment relates to the role of personnel, patterns of organization and utilization, the relationship of materials to learning, and to the realities of a world of rapidly changing technological progress and obsolescence.

In such a world the constant is change. It is only possible, therefore, to employ adaptive types of organizational patterns. Such changeable patterns will require specialized personnel whose vision extends beyond the function of mechanical information retrieval and storage, and who can develop flexible kinds of facilities that will not limit the application of the tools and skills appropriate to the instructional materials specialist.

Failing this, we have defined, once more, the static instructional materials center operating efficiently within its own walls. The unique capabilities of the specialist become confined and the positions, as functions, are depressed to some extent. Such depression of function in the midst of increasingly complex materials and devices prevents the breadth of communication and constrains the potential influence on the teacher-learner, an essential in the coordination of flexible instructional programs. In place of the coordinated materials center, coordination must come from the highest level of instructional decision making.

Regardless of the size or complexity of the educational system, the clarification of the place of the materials program in the curriculum will result in a better identification of its place in the organizational pattern. In this context the obligations of educational leadership would be placed in clear perspective at all levels. Effective implementation, imaginative application, personnel, budget, space, and the like are seen as they impinge on the utilization of instructional materials and devices. Only a significantly more dynamic contribution to instructional improvement can result.

Where Is the Switch?

Allan Finstad

drawings by Owen Finstad

The author will be known to many readers as a manufacturers representative, first for Beseler, then Ozalid and Dage. Here he outlines the problems of AV from the viewpoint of a fresh returnee to the education field. Since last fall he has been coordinator of audiovisual services, Foothill Junior College, Los Altos Hills, California.

TECHNOLOGY IN EDUCATION is often approached with reference to machines, especially teaching machines. Prophetic generalizations are made about an impending "technological revolution." This revolution must be "impending" because, while there are signs, the machines or the revolution are certainly not overwhelmingly evident in contemporary classrooms.

The facilities needed for effective audiovisual communication are hardly revolutionary. The basic mechanisms, the optics, the prime electronic components and circuits have long ago been invented. They are continually being adapted for varied purposes as a matter of course and good business management in industrial concerns. In fact, the bits and pieces are found in the science laboratories and technical departments of our schools. We use refined systems of intercom as a matter of operational convenience. Yet, when we speak of the educational use of audiovisual communications, these facilities are sadly lacking even in our most outspokenly progressive schools.

This may be the long way of saying that elements and techniques for revolutionizing educational communications are all around us, but as educators we have not really experienced them. We have been too shy on product knowledge to sell the concepts. We are hard put to ask intelligent questions, let alone provide answers or resolve audiovisual communications requirements into technical specifications. To paraphrase Dr. Dale in his address to AVEAC in Long Beach, our perceptions in this matter have been frozen. [See page 190 for more of Dr. Dale's address.]

So we continually hear expressions from the suppliers and manufacturers representatives that the "blankety-blank" educators don't know what they want. Admittedly, most school administrators and audiovisual directors have never learned the colloquialisms or even the accepted terminology that go with a provincial discourse in communications engineering. However, naive as the educator may be in this area, the purveyor of electronic goods is generally equally innocent concerning the connotations attending an elite discussion of contemporary educational doctrine.

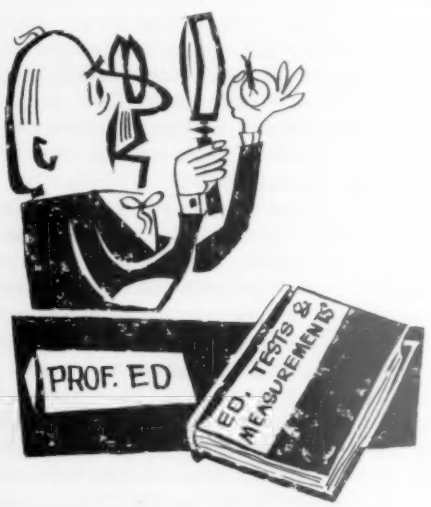
So we have a communication block between the two, while the need to interact is mutual.

This article submits that the gap can be bridged and other benefits gained by providing strong technological support for audiovisual programs at the institutional level. It further suggests areas of specialization which, in combination, would characterize an ideal audiovisual technologist. We need him as a technical language interpreter, instructor, sales engineer and practitioner. We also need him as an all-around improvisor.

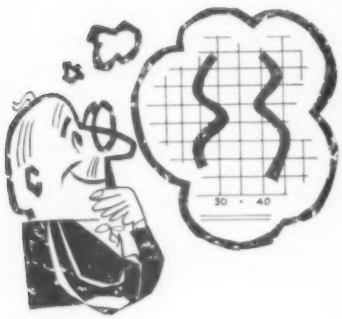
We are a long ways from automation in audiovisual communication even in a modest sense. While we are in the process of dreaming up this blessed state, we must make small beginnings in many directions by improvising. I think we can best appreciate the scope of this problem, and also the opportunity, by looking at the potential audiovisual service of any typical educational system or institution.

First, let us consider that all audiovisual materials and equipment fall into three categories of purpose: (a) design and composition; (b) preparation or production; and (c) presentation. Collectively, these categories will include the many items that are of the following types: (a) charts, posters, pictures; (b) sound tapes and recordings; (c) still and motion picture film; and (d) live presentations with combinations of (a), (b), and (c) above.

These types of materials and equipment, serving the three categories of purpose, become our compound and complex of audiovisual resources. They will include



I'll grant you transistors are reliable—but are they valid?



Computress? A machine with a gender? Normal curve?

Accord with educational disciplines? Better call in the humane society.

Interaction? Aw, don't worry, we'll add it as the first position on the selector switch.

libraries of purchased and prepared materials, drawing aids and instruments, paper and film stocks, still and motion picture cameras, printers, enlargers, copy stands, chemicals, easels, tripods, still and motion picture projectors, tape and record players, chalk boards, flannel boards, television equipment, lighting, etc., etc., etc.

Further, we recognize that these resources must be multiplied to serve the varied courses, student activities, and administrative programs of a school system. It becomes obvious that even a fraction of the potential demand for audiovisual service can exhaust an expanded audiovisual facility.

The growing habit of audiovisual utilization will perhaps tend to resolve the pattern of an audiovisual service in two ways. One way will be a form of decentralization within the separate departments, especially for local preparation of materials, custody of machines and mechanized laboratories. The other way will be a refinement of the centralized service into forms of consultation, experimental coordination, resource information, technical assistance and the automated distribution of programmed information of common interest.

In the first instance we are in a stage of an impoverished beginning, calling for all manner of improvization involving the use of optics, sound, photography and electronics. But with the help of our prospective technologist, we can successfully improvise and initiate simple techniques and applications. The technologist can help us to orient faculty members in the use of such adaptations.

Re-Interpreting the Problems

There is evidence that, as an alternate to blaming instructors and administrators for retarded progress, the audiovisual group is collectively criticizing itself for lack of salesmanship. Perhaps we are beginning to recognize that the matter is not indolence on the part of instructors, or undue conservatism on the part of administrators and school boards. The problem is rather a lack of definition of programs and equipment. Exactly, what do we want, for what? We are in need of an audiovisual sales engineer.

The tax burden necessary for multiplying classroom space and associated services in terms of traditional school and college programming can be a most potential point for public support. Novel teaching systems that will absorb the problem of time and space are needed. Educational needs must in the future be more forcefully expressed in terms of audiovisual communication facilities. They must also be expressed in terms of professional and technological staff qualifications. This is to assure proper leadership and technical support for the effective specification, operation and programming of these facilities.

True, we are capable of expressing the need in a philosophical manner — we know of the learning process. But, let our president, superintendent, board member ask us, "what is it specifically that you want?" Shall we then run to our friend the Vendor, and ask him to speak for us? The one we can hardly communicate with? This is not an idle conjecture. We know full well that this is what we do.

Again, this is a long way of saying that we need to sell something we do not quite know how to define, primarily because we have not mastered the technical language. We have trouble translating it to educational and lay terms. The plateaus of selling are quite similar to the plateaus of learning. We can use an over simplified comparison of teaching and selling to illustrate the point. We say that a student has arrived when he can express himself creatively or perform creatively. This can happen when he is motivated on the basis of newly acquired attitudes and appreciations, which in turn are the result of understandings. The understanding is gained through experience, real, simulated, or observed. In like manner, the customer buys when he is motivated. He is motivated when he is convinced that a product's benefits are more valuable to him than his gold. He is convinced when he has really or vicariously experienced these benefits. For example, would you buy a house without seeing it or walking through it? Or an automo-

(See the next page)

bile without driving it? We do not excuse a teacher from subject matter knowledge. Likewise, one of the prime factors, in addition to enthusiasm, proper atmosphere, personality, etc., for success in selling is product knowledge. We need our technologist to give us practical support in translating our audiovisual communications requirements into the operational characteristics of our proposed equipment and systems. He can be our sales engineer.

In general, we need him across the board, so to speak, for ingenuity in improvising the simplest of techniques to defining, technically, our most complex systems and audiovisual combinations.

The following are basic subjects in which the technologist should have some theoretical, but especially, practical training and experience:

OPTICS: Properties and uses of lenses

PHOTO-OPTICS: Applications to copying, enlarging and processing

PHOTO-CHEMISTRY: Processing and development applied to photographic, diazo and diffusion materials

SHOP PRACTICES: Construction materials, basic mechanisms and drafting

ELECTRICITY AND ELECTRONICS: Applications to power distribution, audio and video equipment and circuits, and equipment maintenance

EDUCATION: Psychology of learning and audiovisual methods.

We may again note, in conclusion, that systems arrangements of basic mechanisms, optics and electronic components are continually being adapted and adopted for all manner of industrial productive activity. This is not so much the result of casual invention or discovery as it is the result of purposefully planned programs for invention and application; in other words, "research and development."

It seems that in the field of audiovisual education, we spend a great deal of effort appraising and evaluating equipment and systems that tend toward obsolescence, or that were originally designed for purposes other than educational. I would suggest that the associations of audiovisual educators, dealers and manufacturers is now large enough and strong enough, with enough cumulative talent to initiate programs that can implement the technology of which we speak. And further, to encourage institutions to train men and women to be technologists in audiovisual education.

But, let us not confuse this with a "language laboratory," a "teaching machine," or a "television installation." We are primarily concerned first, with accelerating the habit of the utilization of audiovisual media, and second, with our capability to program for, and to support this growth.

The parameter for audiovisual communication is not linear, it is spherical; the change is not a revolution, it is an evolution; the means are technical as well as psychological.

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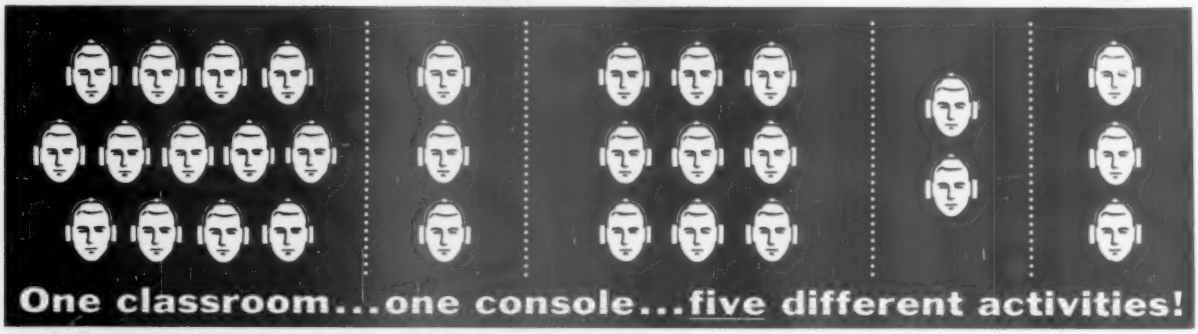

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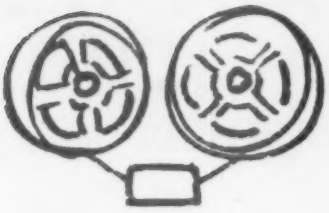

ARCHITECTURE AND EQUIPMENT FOR THE LANGUAGE LABORATORY

BY CHARLES WILLIAM BRUBAKER
PERKINS & WILL, ARCHITECTS

LANGUAGE SKILL, SO NECESSARY FOR READING, WRITING, AND ORAL COMMUNICATION, IS ALSO ESSENTIAL FOR THE UNDERSTANDING OF FOREIGN CULTURES. SINCE THE LANGUAGE LEARNING PROCESS INVOLVES 1) UNDERSTANDING BY HEARING, 2) SPEAKING, 3) READING, AND 4) WRITING, IT IS APPARENT THAT EFFECTIVE LISTENING AND SPEAKING PRACTICE IS WORTH SEEKING. THE LANGUAGE LABORATORY, UNKNOWN 15 YEARS AGO, HAS BECOME AN EFFECTIVE TOOL FOR LEARNING. IN THIS STUDY, WE EXPLORE USES AND FUNCTIONS, BELIEVING THAT COMPREHENSION IS ESSENTIAL TO THE PROPER DESIGN AND SELECTION OF EQUIPMENT, AND IS AN ESSENTIAL INGREDIENT IN THE ARCHITECTURE OF SCHOOLS THAT ARE TO SERVE NOT ONLY TODAY'S KNOWN PROGRAMS BUT ALSO TOMORROW'S UNKNOWN PROGRAMS.

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(Joseph C. Hutchinson, at the 1960 Conference at Indiana University)

" STUDENTS SHOULD HAVE OPPORTUNITIES TO REACH EDUCATIONAL GOALS FAR BEYOND THOSE USUALLY PROVIDED IN TODAY'S SCHOOLS.

" THE SIZE AND NATURE OF INSTRUCTIONAL GROUPS SHOULD VARY WITH THE PURPOSES TO BE ACHIEVED AND THE CONTENT TO BE LEARNED.

"SCHEDULES SHOULD PERMIT FLEXIBLE PROGRAMS AND STILL ACCOUNT ACCURATELY FOR STUDENTS.

"THE CURRICULUM SHOULD IMPEL MAXIMUM DEVELOPMENT OF THE INTELLECTUAL POWERS OF ALL STUDENTS.

" MORE VIGOROUS EFFORTS SHOULD BE MADE TO BRING THE MEANS OF COMMUNICATING IDEAS ABREAST OF THE LATEST SCIENTIFIC ADVANCES."

—Some notes from "NEW DIRECTIONS TO QUALITY EDUCATION" by J. Lloyd Trump.

LANGUAGE LABORATORY ARCHITECTURE AND EQUIPMENT ARE DETERMINED BY HOW THE STUDENT STUDIES

LISTENING ONLY
(AUDIO-PASSIVE)

THE STUDENT, WEARING HEADPHONES, HEARS THE MASTER RECORD OR TAPE RECORDING.

LISTENING & RESPONDING
(AUDIO-ACTIVE)

THE STUDENT LISTENS TO THE MASTER RECORDING, RESPONDS INTO HIS MICROPHONE AND HEARS HIS OWN VOICE INSTANTANEOUSLY THRU HIS HEADPHONES.

LISTENING, RESPONDING, RECORDING & COMPARING
(AUDIO-ACTIVE-COMPARATIVE)

THE STUDENT LISTENS TO THE MASTER RECORDING, RESPONDS, AND RECORDS ON TAPE BOTH THE MASTER VOICE AND HIS OWN VOICE. HE THEN PLAYS BACK THE TAPE TO COMPARE THE MASTER AND HIS OWN VOICE.

INDIVIDUAL STUDY

SAME AS ABOVE EXCEPT EACH STUDENT CAN WORK INDEPENDENTLY (AT HIS OWN LEVEL AND RATE) WITH MASTER TAPES ON HIS OWN RECORDER.

LANGUAGE LABORATORY COMPONENTS -

FOR THE GROUP (USUALLY AT THE TEACHER'S CONSOLE)

RECORD PLAYER

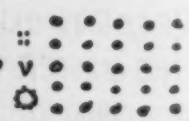
TEACHER CAN PLAY RECORDS

TAPE RECORDER & PLAYBACK

TEACHER CAN MAKE RECORDINGS AND PLAY MASTER TAPES

TEACHER CAN RECORD STUDENTS' RESPONSES

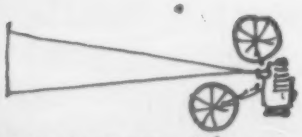
CONTROL PANEL



TEACHER CAN MONITOR, RECORD, AND COMMUNICATE WITH ANY STUDENT

MANY PROGRAM SOURCES

TEACHER CAN DIRECT MANY DIFFERENT PROGRAMS TO DIFFERENT STUDENTS



FOR THE INDIVIDUAL STUDENT (AT HIS OWN PLACE)

HEAD-PHONES

STUDENT CAN LISTEN TO RECORDINGS

MICRO-PHONE

STUDENT CAN LISTEN AND RESPOND AND HEAR HIS OWN VOICE.

STUDENT TAPE RECORDERS

STUDENT CAN RECORD BOTH MASTER AND HIS OWN VOICE AND COMPARE.

CHANNEL SELECTOR

STUDENT CAN SELECT HIS PROGRAM

INDIVIDUAL TAPE RECORDER

STUDENT CAN USE MASTER TAPES TO SUIT HIS OWN NEEDS AND AT HIS OWN RATE.

COORDINATED VISUAL AIDS

STUDENT CAN SEE THE CULTURE OF THE LANGUAGE.

TWO BASIC TYPES OF LANGUAGE LABORATORIES -

1. REGULAR CLASS-ASSIGNED GROUP USE

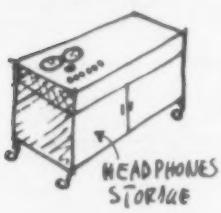
- A PART OF THE REGULAR CLASS ASSIGNMENT.
- CLASS USES THE LAB ON GROUP BASIS, DIRECTED BY TEACHER.
  (FOR EXAMPLE — 2 OR 3 HALF-HOUR PERIODS EACH WEEK)
- COMMONLY USED IN HIGH SCHOOLS

2. INDEPENDENT STUDY FACILITY INDIVIDUAL USE

- A SUPPLEMENT TO CLASSROOM INSTRUCTION
- EACH STUDENT USES LAB ON INDIVIDUAL BASIS
  (WHENEVER HIS OWN SCHEDULE PERMITS)
- COMMONLY USED IN COLLEGES
  BUT ALSO RECOMMENDED FOR HIGH SCHOOLS

OTHER POSSIBILITIES -

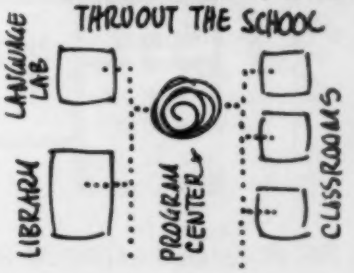
"MOBILE LAB"
ROLLS INTO MANY ROOMS -



PRACTICE OR "DRILL ROOM"
... CLASS LISTENS, & RESPONDS IN CHORUS
(ONLY PLAYER & SPEAKER REQUIRED)

"LANGUAGE LOUNGE"
FOR GROUP CONVERSATION EXPERIENCE & PRACTICE.

"PROGRAM CENTER"
(EQUIPMENT)
SERVING MANY SPACES THROUT THE SCHOOL



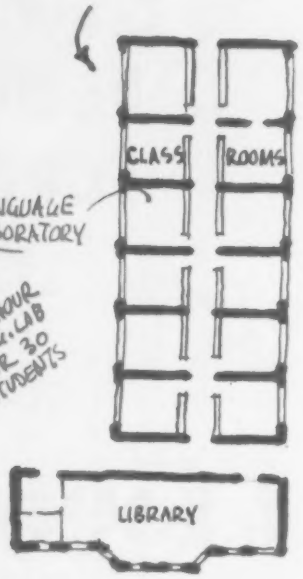
SCHEDULING

CLASSES OF 30 AND
UNVARYING, RIGID SCHEDULES CREATE UNVARYING RIGID ROWS OF CLASSROOMS

MON	TUES	WED	THURS	FRI
ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH
SCIENCE	SCIENCE	SCIENCE	SCIENCE	SCIENCE
STUDY HALL	STUDY HALL	STUDY HALL	STUDY HALL	STUDY HALL
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
LANGUAGE	LANGUAGE	LANGUAGE	LANGUAGE	LANGUAGE
SOCIAL SCIENCE	SOCIAL SCIENCE	SOCIAL SCIENCE	SOCIAL SCIENCE	SOCIAL SCIENCE
PHYS. ED.	PHYS. ED.	PHYS. ED.	PHYS. ED.	PHYS. ED.

SAME HOUR CLASS DAILY FOR 30 STUDENTS

FULL HOUR LANG. LAB FOR 30 STUDENTS



CLASSES OF VARYING SIZE
AND FLEXIBLE INDIVIDUAL SCHEDULES CREATE FLEXIBLE LEARNING SPACES

MON	TUES	WED	THURS	FRI
STUDY	ENGLISH	STUDY	ENGLISH	STUDY
ENGLISH		ENGLISH		ENGLISH
SCIENCE	LANGUAGE	SCIENCE	LANGUAGE	INDIV. STUDY
	STUDY		STUDY	
	SCIENCE		SCIENCE	
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
LANGUAGE	SOCIAL SCIENCE	LANGUAGE	SOCIAL SCIENCE	COMBINED LANGUAGE SOCIAL SCIENCE
SOCIAL SCIENCE	PHYS. ED.	SOCIAL SCIENCE	PHYS. ED.	
INDIV. STUDY		INDIV. STUDY		INDIV. STUDY

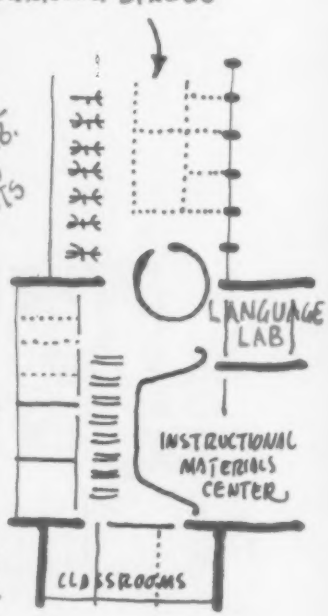
HALF HOUR LANG. LAB FOR 40 STUDENTS

FULL HOUR LANG. CLASS FOR 20 STUDENTS

HALF HOUR LANG. LAB. FOR 40 STUDENTS

1½ HOUR FOREIGN CULTURE CLASS

INDIVIDUAL LANG. STUDY IN LIBRARY AS REQ'D.



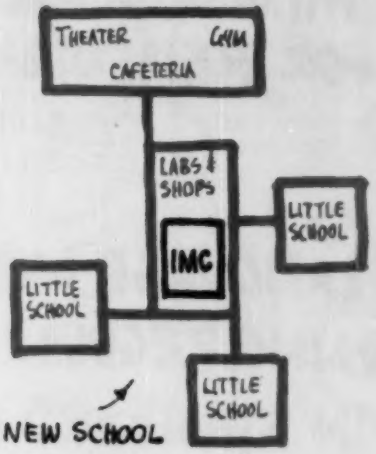
FOR MORE INFORMATION ON FLEXIBLE SCHEDULING, SEE "IMAGES OF THE FUTURE" BY J. LLOYD TRUMP

LANGUAGE LABORATORY

LOCATION IN THE SCHOOL -

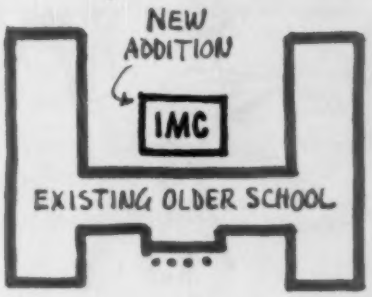
SINCE TAPES, RECORDS, SLIDES & FILMS ARE USED — AND BECAUSE IT IS A LIBRARY-STUDY FACILITY (IN ADDITION TO BEING A CLASSROOM)

THE LANGUAGE LABORATORY SHOULD BE A PART OF THE INSTRUCTIONAL MATERIALS CENTER (IMC) AT THE HEART OF THE SCHOOL...



THE IMC IN THE NEW SCHOOL

THE IMC IN THE OLD SCHOOL

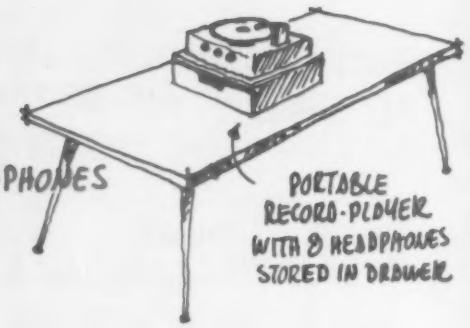


FOR ADDITIONAL NOTES ON THE "IMC" SEE "PLANNING SCHOOLS FOR NEW MEDIA" BY DE BERNARDIS, DOHERTY, HUMMEL, & BRUBAKER.

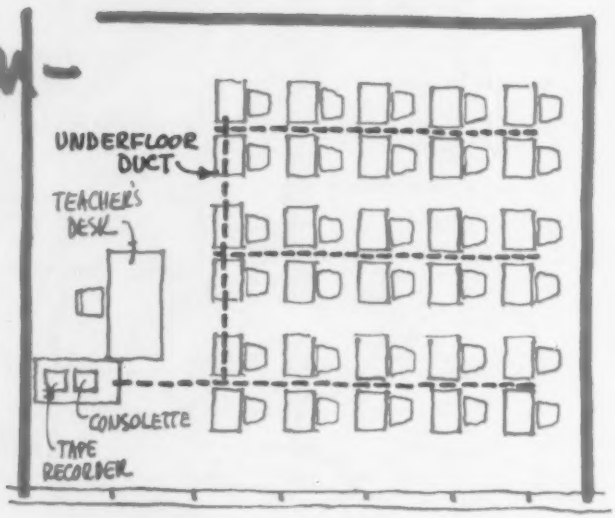
LABORATORY DESIGN-

MINIMUM FACILITY FOR ELEMENTARY SCHOOLS -

STUDENTS SIT AROUND TABLE
FOR LISTENING ONLY - WITH HEADPHONES



LANGUAGE LABORATORY USING REGULAR DESKS IN STANDARD CLASSROOM -



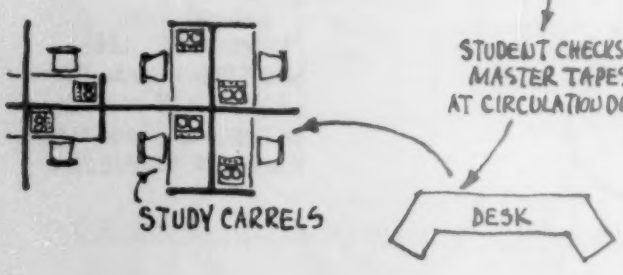
INDIVIDUAL STUDY -

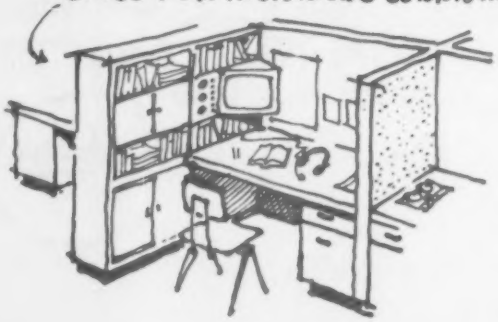
(ONE STUDENT USING MASTER TAPES INDIVIDUALLY AND AT HIS OWN RATE...)

- CAN OCCUR IN A LAB. PROPERLY EQUIPPED -
BUT ALSO CAN OCCUR IN THE LIBRARY OR IN ONE STUDENT'S Q-SPACE -

Q FOR QUEST

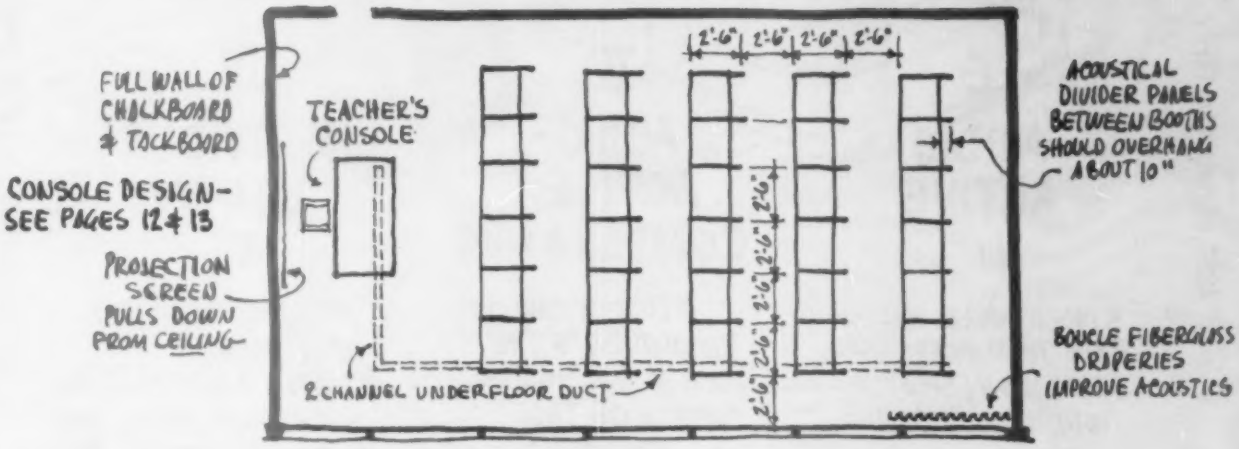
- SPACE FOR INDIVIDUAL LEARNING.





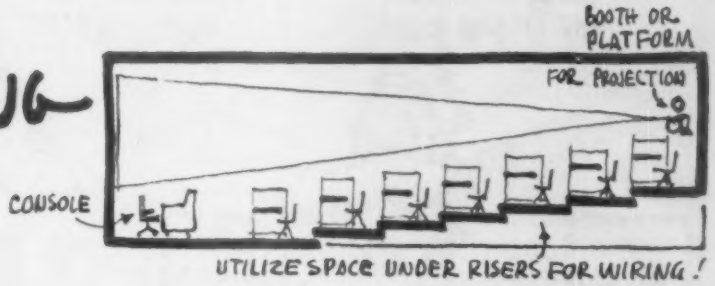
TYPICAL 30 BOOTH LANGUAGE LABORATORY-

BOOTH DESIGN-
SEE PAGES 10 & 11


FULL WALL OF CHALKBOARD & TACKBOARD
CONSOLE DESIGN- SEE PAGES 12 & 13
PROJECTION SCREEN PULLS DOWN FROM CEILING-
TEACHER'S CONSOLE
2 CHANNEL UNDERFLOOR DUCT
2'-6"
ACOUSTICAL DIVIDER PANELS BETWEEN BOOTHS SHOULD OVERHANG ABOUT 10"
BOUCLE FIBERGLASS DRAPERIES IMPROVE ACOUSTICS

STEPPED FLOOR IMPROVES VIEWING-

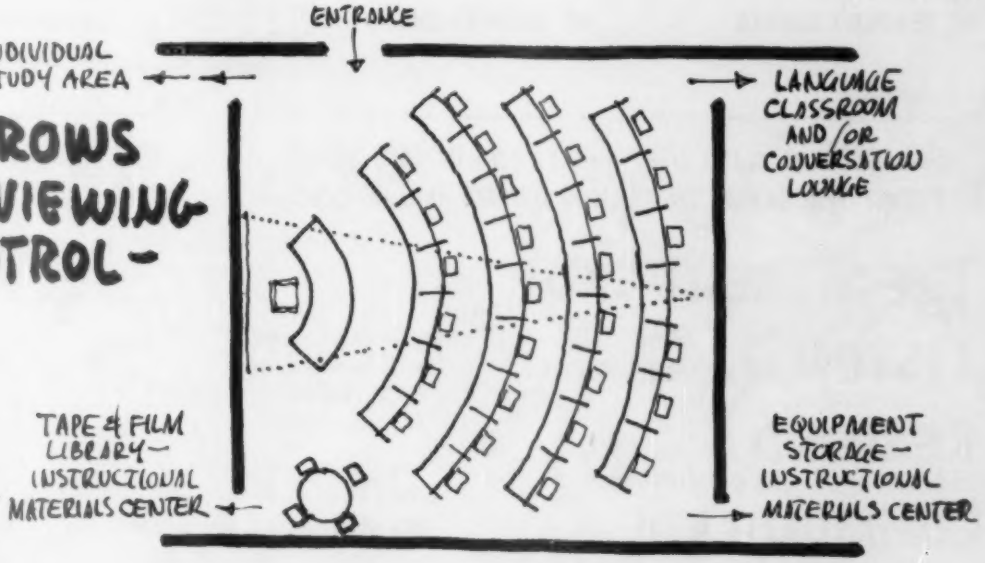
EXAMPLE:
PURDUE'S NEW LABS
IN COULTER HALL.



CURVED ROWS IMPROVE VIEWING AND CONTROL-

EXAMPLE:
ECKEL

"SPOKEN LANGUAGE GAINS IN MEANING BY ITS RELATION TO THE IMMEDIATE VISUAL CONTEXT"
(Elton Hocking)


ENTRANCE
INDIVIDUAL STUDY AREA
LANGUAGE CLASSROOM AND/OR CONVERSATION LOUNGE
TAPE & FILM LIBRARY- INSTRUCTIONAL MATERIALS CENTER
EQUIPMENT STORAGE- INSTRUCTIONAL MATERIALS CENTER

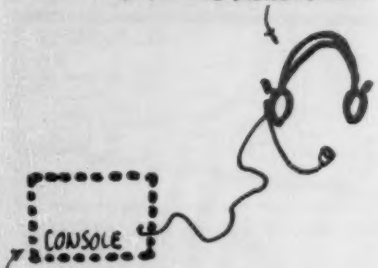
DESIGN OF STUDENT BOOTHS –

THREE MAJOR FUNCTIONAL TYPES:

MOST ECONOMICAL TYPE →

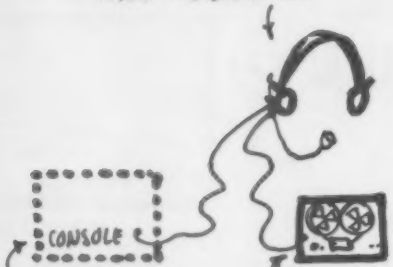
I AUDIO-ACTIVE

STUDENT HEARS MASTER TAPE THRU HEADPHONES, RESPONDS BY SPEAKING INTO HIS MICROPHONE, HEARS HIMSELF INSTANTANEOUSLY THRU HIS HEADPHONES.



II AUDIO-ACTIVE-COMPARATIVE

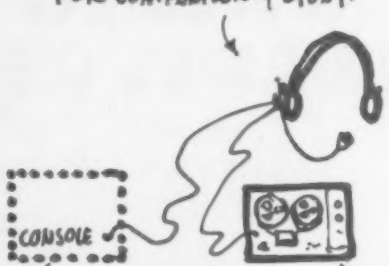
STUDENT CAN RECORD BOTH THE MASTER AND HIS OWN SPEECH ON TAPE, THEN PLAYBACK THE RECORDING, LISTEN AND COMPARE.



III INDIVIDUAL STUDY

STUDENT CAN WORK INDEPENDENTLY WITH APPROPRIATE MASTER TAPE, RECORD BOTH MASTER AND HIS OWN RESPONSES, THEN PLAYBACK THE RECORDING FOR COMPARISON & STUDY.

MOST EXPENSIVE (BUT MOST USEFUL) →



FOR REGULAR CLASS USE ····· TEACHER CAN DIRECT DIFFERENT PROGRAMS TO VARIOUS GROUPS IN THE CLASS.

FOR BOTH CLASS AND LIBRARY OR INDIVIDUAL STUDY.

THE STUDENT CAN –

I **LISTEN** TO MASTER LESSONS.

I **RESPOND** AND HEAR HIS OWN VOICE.

I **COMMUNICATE** WITH THE TEACHER, AND OTHER STUDENTS.

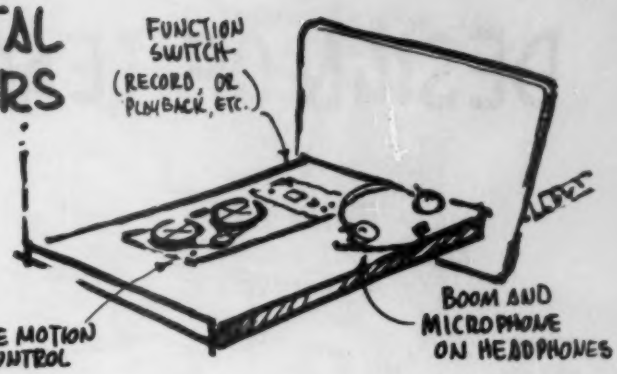
II **RECORD** BOTH THE MASTER AND HIS OWN VOICE.

II **COMPARE** HIS OWN VOICE WITH THE MASTER MODEL VOICE.

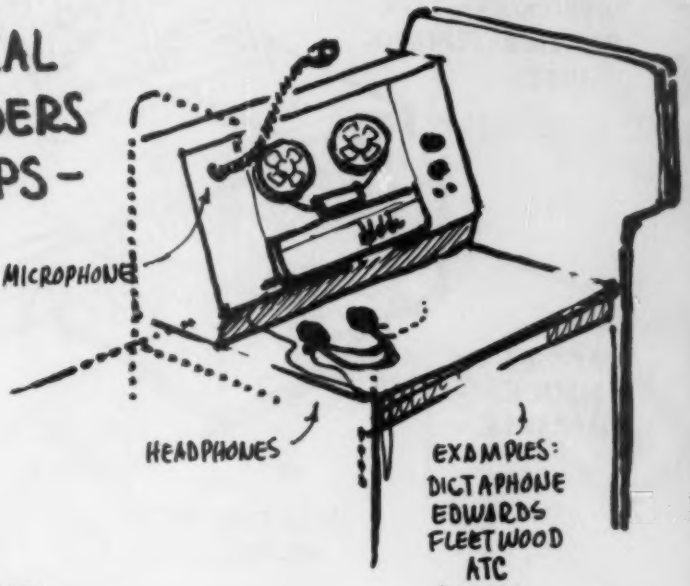
III **STUDY INDIVIDUALLY** WORKING WITH A SPECIAL MASTERTAPE APPROPRIATE TO HIS OWN NEEDS ... AND AT HIS OWN RATE.

BOOTHS WITH HORIZONTAL STUDENT TAPE RECORDERS IN DESK TOPS –

EXAMPLES:
MONITOR
RHEEM-CALIFONE
DUKANE
RCA
JENTZEN-MILLER



BOOTHS WITH VERTICAL STUDENT TAPE RECORDERS AT FRONT OF DESK TOPS –

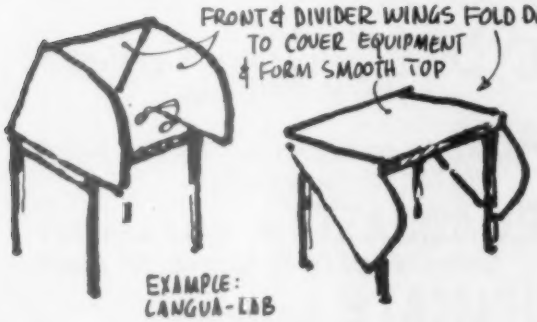


EXAMPLES:
DICTAPHONE
EDWARDS
FLEETWOOD
ATC
BERNCO

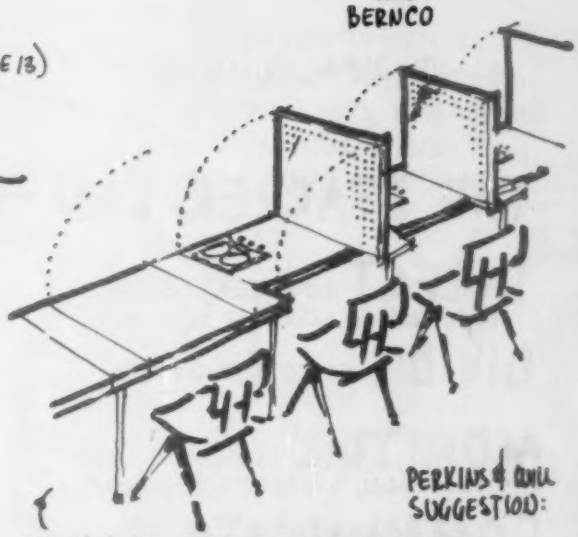
BOOTHS WITH STUDENT RECORDERS AT REMOTE LOCATION –

EITHER AT TEACHER'S CONSOLE (SEE AMERICAN SEATING, PAGE 13)
OR AT REMOTE CABINET (SEE PAGE 15)

CONVERTIBLE BOOTHS –

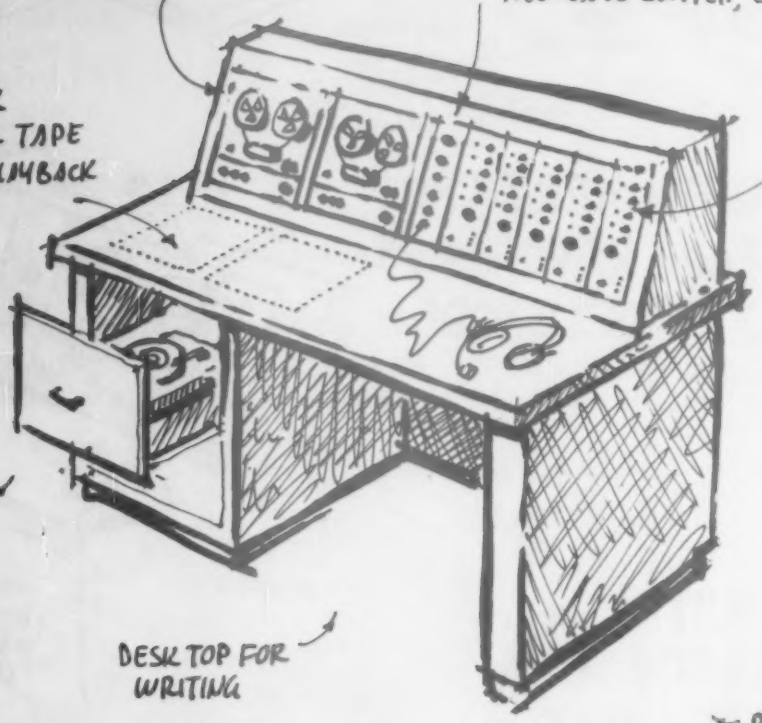


EXAMPLE:
LANGUA-LAB



PERKINS & CHILL SUGGESTION:
WHEN AUDIO EQUIPMENT IS NOT IN USE, CONTINUOUS SMOOTH TABLE TOP SERVES OTHER NEEDS

DESIGN OF TEACHER'S CONSOLE -


MASTER TAPE RECORDERS AND PLAYBACKS AND CONTROLS
TEACHER'S CONTROL PANEL - JACKS FOR HEADPHONES & MICROPHONE, ALL-CALL SWITCH, ETC.
SPACE FOR ADDITIONAL TAPE RECORDER-PLAYBACK UNITS
MASTER CONTROL SWITCH PANELS ENABLE TEACHER TO MONITOR, RECORD, OR COMMUNICATE WITH ANY STUDENT.
RECORD PLAYER IN DRAWER
DESK TOP FOR WRITING

TYPICAL CONSOLE -

EXAMPLES:
- RHEEM CALIFONE
- HAMILTON
- MONITOR
- RCA

THE TEACHER CAN -

DIRECT DIFFERENT LESSON PROGRAMS TO SELECTED STUDENTS.

DIVIDE CLASS INTO GROUPS

MONITOR (LISTEN TO) EACH INDIVIDUAL STUDENT'S RESPONSES.

COMMUNICATE WITH ANY STUDENT, TO CORRECT & INSTRUCT.

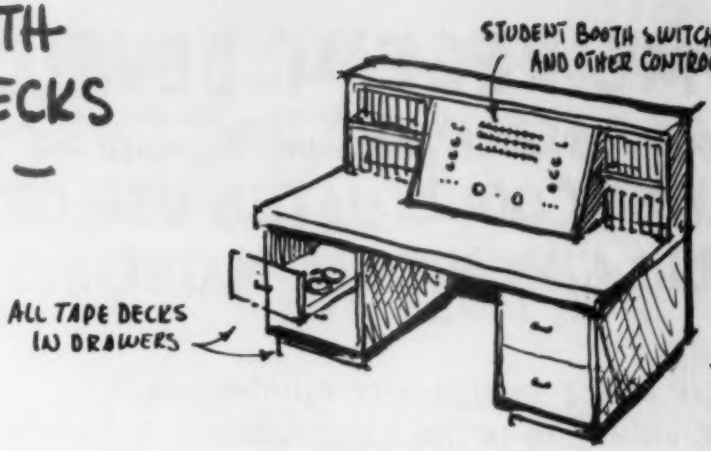
RECORD ANY STUDENT'S RESPONSES ON A TAPE AT THE CONSOLE.

TALK TO AN INDIVIDUAL, A ROW, A GROUP OR TO THE ENTIRE CLASS.

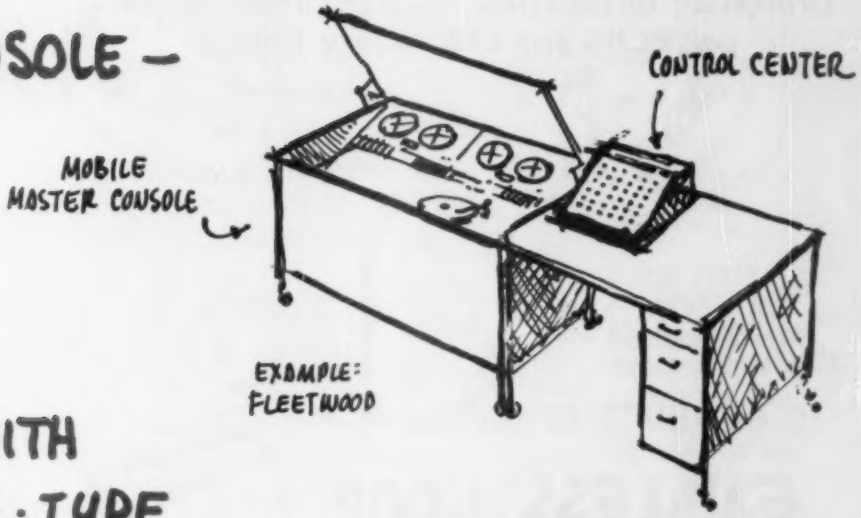
BROADCAST ONE, OR TWO STUDENTS' CONVERSATION TO A GROUP OR THE CLASS.

DUPLICATE MASTER TAPES, AND RECORD MASTER LESSONS ON TAPE.

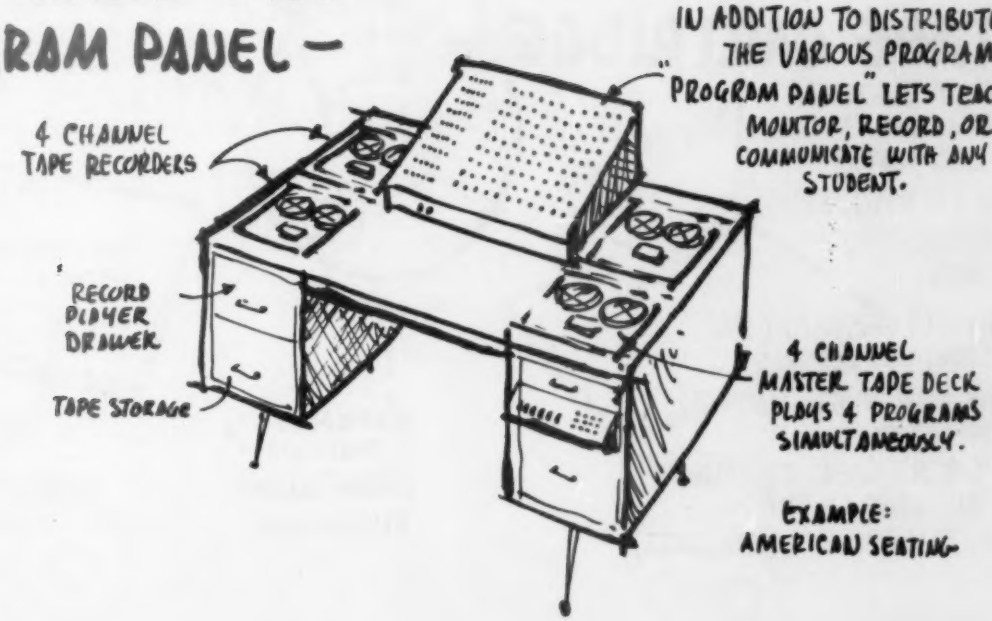
CONSOLE WITH ALL TAPE DECKS IN DRAWERS –



MOBILE CONSOLE –



CONSOLE WITH COORDINATE-TYPE PROGRAM PANEL –


IN ADDITION TO DISTRIBUTING THE VARIOUS PROGRAMS, "PROGRAM PANEL" LETS TEACHER MONITOR, RECORD, OR COMMUNICATE WITH ANY STUDENT.
4 CHANNEL TAPE RECORDERS
RECORD PLAYER DRAWER
TAPE STORAGE
4 CHANNEL MASTER TAPE DECK PLAYS 4 PROGRAMS SIMULTANEOUSLY.
EXAMPLE: AMERICAN SEATING

SOME RECENT DEVELOPMENTS-

REMINDER: LANGUAGE IS MULTI-SENSORY" (Hocking)

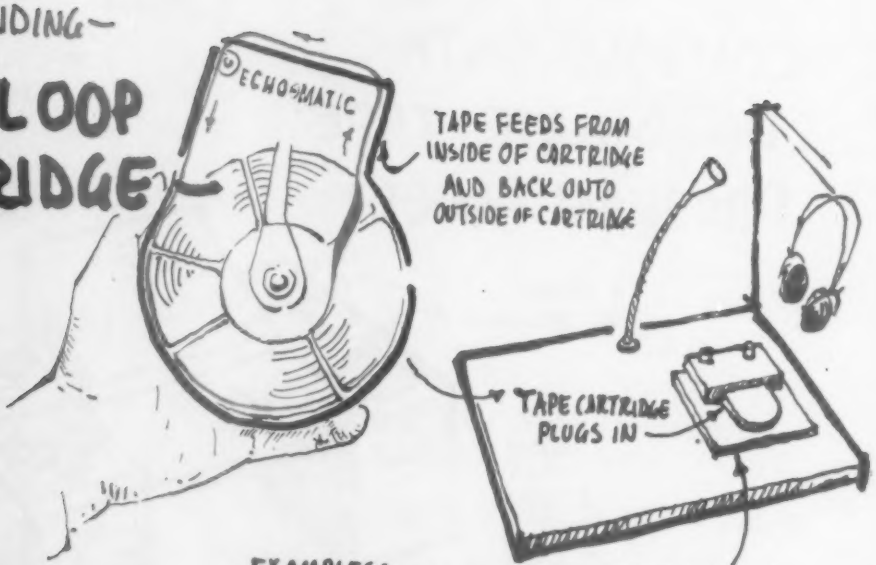
TREND: COORDINATED USE OF AUDIO AND VISUAL MATERIALS

- OBJECTS, MODELS
- MAPS, POSTERS
- PHOTOGRAPHS, SLIDES, FILMSTRIP (EXAMPLE: SVE)
- MOTION PICTURES (EXAMPLE: RECENT PURDUE FILMS FOR LANGUAGE LABS.)
- AND NEXT... VIDEO-TAPE!

"... WE CAN EXPECT EVEN GREATER REINFORCEMENT IN THE VISUAL AIDS IN THE NEAR FUTURE AS A RESULT OF... PROJECTS WHICH ARE COMPLETELY INTEGRATING AUDIO AND VISUAL MATERIALS FOR CLASS AND LABORATORY WORK."
(Hutchinson)

TO ELIMINATE RE-WINDING-

ENDLESS LOOP TAPE CARTRIDGE



NOTE:
SIMPLICITY OF OPERATION SOMETIMES REQUIRES COMPLEXITY OF EQUIPMENT!
THEREFORE -
WE SHOULD SEEK EQUIPMENT "AS RELIABLE AS THE DIAL TELEPHONE" (WM. LOCKE)

EXAMPLES:
COUSINO
LINGUA-TRAINER
ELECTROFONIC

TRANSISTORIZED 2-TRACK REPEATER-RECORDER

DESIRE FOR SIMPLICITY OF OPERATION AND BROAD SELECTION OF MASTER TAPES:

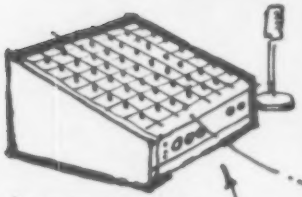
PERHAPS TOO MUCH EQUIPMENT IN FRONT OF THE STUDENT DETRACTS HIM FROM LANGUAGE.

THE STUDENT SHOULD HAVE AVAILABLE TO HIM MANY MASTER TAPES THAT VARY IN DIFFICULTY, KIND, AND NATIVE VOICE.

TREND: AUTOMATIC REMOTE CONTROL LANGUAGE LAB SYSTEM

REMOTE HOUSING OF EQUIPMENT

REMOTE CABINET HOUSES ALL EQUIPMENT, MASTER & STUDENT RECORDERS, AMPLIFIERS, POWER SUPPLY, ETC.

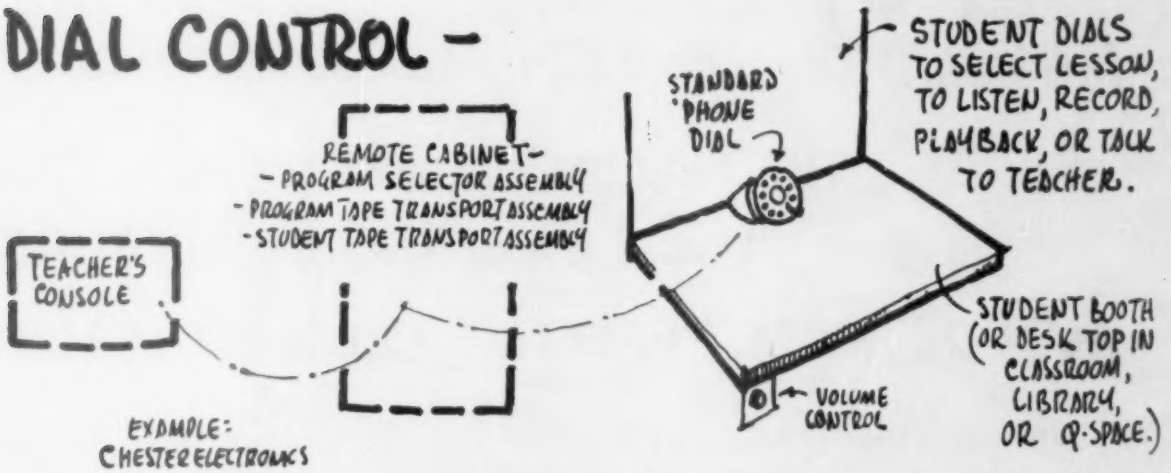


THE TEACHER HAS ONLY A TABLE TOP CONSOLE – TO SELECT PROPER CHANNEL FOR EACH STUDENT, ETC.

EXAMPLE: LINGUA-TRAINER

THE STUDENT HAS ONLY –
- HEADPONES WITH MICROPHONE ON BOOM
- RECORD/PLAYBACK SWITCH
- PILOT LIGHT "ON" FOR RECORDING
- AND VOLUME CONTROL.

DIAL CONTROL –


REMOTE CABINET –
- PROGRAM SELECTOR ASSEMBLY
- PROGRAM TAPE TRANSPORT ASSEMBLY
- STUDENT TAPE TRANSPORT ASSEMBLY
TEACHER'S CONSOLE
STANDARD PHONE DIAL
STUDENT DIALS TO SELECT LESSON, TO LISTEN, RECORD, PLAYBACK, OR TALK TO TEACHER.
STUDENT BOOTH (OR DESK TOP IN CLASSROOM, LIBRARY, OR Q-SPACE.)
VOLUME CONTROL

EXAMPLE: CHESTER ELECTRONICS

TOMORROW—

STUDENTS WILL HAVE
MORE OPPORTUNITY FOR
INDIVIDUAL STUDY.

LANGUAGE LABORATORY SYSTEMS
WILL BECOME MORE AUTOMATIC
WITH SIMPLICITY OF OPERATION, AND
BROAD SELECTION OF MATERIALS.

SYSTEMS MAY
BECOME WIRELESS.

AUDIO AND VISUAL MATERIALS
WILL BE COORDINATED.

VIDEO-TAPE WILL SERVE
GROUP AND INDIVIDUAL LEARNING.

THE TEACHING MACHINE
(SUPPLYING THE READING-WRITING-TESTING ELEMENTS)
MAY JOIN THE AUDIO & VISUAL COMPONENTS.

THE "LANGUAGE LABORATORY" MAY BECOME
THE LEARNING LABORATORY

—ALL FOR MORE EFFECTIVE LANGUAGE LEARNING.

—A STUDY FOR THE EDUCATIONAL FACILITIES LABORATORIES
BY CHARLES WILLIAM BRUBAKER; PERKINS & WILL, ARCHITECTS

1961

Any language teacher who can tune a TV set can easily qualify as an expert in the operation of this RCA Preceptor Language Laboratory console. Two switches give the teacher complete control for each student in the class; switch one, select program; switch two, distribute program, monitor and record student performance, communicate.

It's that simple. But in spite of its simplicity you get an amazing degree of versatility from the Preceptor console. It can handle 10 different lesson tapes simultaneously, transmitting any to any student booth. Thus several languages can be taught at once and a class divided according to individual abilities. What's more, a teacher can monitor and record any student's performance, can communicate with an individual, several students or the whole class and can have one student recite for the class or for selected groups.

You get the same degree of simplicity and versatility in the learning end of the system. The system may include as many student booths as space permits. Each may incorporate equipment for student listening and responding, or, in addition, for student recording.

Both here and in the Preceptor console, RCA engineers have utilized transistors to simplify the design and enhance the performance of the system. The system needs only minimum wiring, so installation costs are low. There's a single power source and low voltage makes operation completely safe. Expansion is readily accomplished, too, at modest cost, without obsoleting present equipment.

Interested in finding out about a Preceptor Language Laboratory that's tailored for your school? That's easy too. Your RCA Educational Electronic Products dealer will be glad to make a survey of your school language laboratory needs. For equipment information or the name of your dealer, write Radio Corporation of America, Educational Electronic Products, Building 15-1, Camden 2, New Jersey.

RCA®

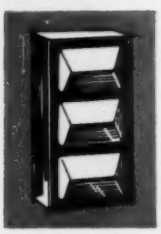
The Most Trusted Name in Electronics

RADIO CORPORATION OF AMERICA

New teaching versatility and ease of operation are yours in *Electrofonic* Language Lab

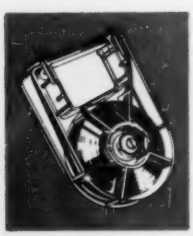
We asked experienced language teachers what equipment they needed to achieve maximum effectiveness in their work. Then our electronic experts designed and built the G. E. C. Electrofonic Language Laboratory to the teachers' specifications. That's why it's more than a mere assembly of existing audio-visual equipment. It's a new, integrated design that provides a complete choice of functions to fit any teaching technique. Yet it has unprecedented simplicity of control. Schools using the Electrofonic Language Lab are enthusiastic about it. Here are some of the reasons why:

EASIER TO OPERATE



Simplified controls leave the teacher free to teach and the student free to learn. Both are relieved of undue preoccupation with mechanical problems. The teacher can play lesson tapes, monitor or talk to individual students, small groups or the entire class—all with fingertip controls that indicate settings clearly. The mechanical operations soon become automatic to both teacher and student. Simplicity makes it possible to use student assistance if desired.

NO TAPE HANDLING PROBLEMS



Instant tape handling is provided by the Electrofonic cartridge system. Threading is automatic when the cartridge is inserted in either the teacher console or student unit. There is never any rewinding. Tapes are automatically set for the beginning of the next lesson. Even new students can operate recording and tape playing equipment quickly, leaving more time for learning. Teachers find it easy to record and duplicate their own lesson tapes.

HIGH FIDELITY

Full range reproduction is important in foreign language learning. The Electrofonic system is "hi-fi" throughout, including student microphones and headsets. Students hear and learn to use all the overtones and fine shadings of tone that are present in accurate, native pronunciation of a foreign language.

COMPLETE TEACHING FLEXIBILITY

Complete choice of teaching techniques is possible with the Electrofonic Language Lab. Students may listen, respond, and record. The teacher may play any combination of lesson tapes to individuals, small groups or the entire class. The teacher may silently monitor any student or group or may talk with any combination of students. Teacher and students can record easily. Student drill is simple, convenient and effective.

Electrofonic Lab is simple to use, easy to expand and economical to operate

JUST PLUG IT IN

Fully transistorized Electrofonic Lab has such low power consumption that it can be plugged into an ordinary, existing classroom circuit. Special wiring is eliminated. Absence of vacuum tube heat makes special air conditioning unnecessary.

START SMALL, ADD UNITS LATER

The elements of the complete Electrofonic Language Lab are designed as modules that can be combined or expanded as desired.

LONG-TERM ECONOMY

Transistorized design means a smaller electric bill and eliminates frequent checking and replacement of vacuum tubes. Quality construction throughout will keep maintenance costs at a minimum.

WE'D LIKE TO TELL YOU MORE

Our language laboratory consultants will be glad to discuss your requirements with you or your architect, and make recommendations with no obligation to you.

A new 8-page brochure giving more details on the Electrofonic Language Lab is yours for the asking.

If you want to see your local representative, or just want the brochure, or have a specific question you'd like answered, please write or telephone today.

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Spring 550 pages $7.25

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432 Park Avenue South
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New 16" table permits use of overhead projector at normal desk top level . . .

. . . teacher remains seated, has easy access to materials usually kept on the desk. Table rolls smoothly on large 4" ball bearing casters. W 16 $29.95. For W 26 which permits standing use of overhead projector $29.95; with electrical assembly $33.95. For details, write:

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546 W. 119th Street Chicago 28, Ill.

Cel Talk

by William G. Henry, Jr.

IN THIS QUICK pictorial introduction to animation, Mr. Levitan has been quite successful in exposing the science as well as the art that is involved in achieving effective animation. In true academic but stimulating style, the fundamental assertion of the "whole being equal to the sum of its parts," is developed concisely but completely, beginning with the raw idea for a sequence and progressing to the finished animated product.

Animation Art in the Commercial Film, by Eli L. Levitan, Reinhold Publishing Corporation, New York, 1960. 128 p.

Such vital phases as story board planning, editing, and the basic techniques of exposure receive appropriate consideration. But particular emphasis, as we should expect it, is given to those things that are intrinsic to the animation field.

Under a section entitled "Production" there are included discussions on the *Hold Cel, Cel Levels,* techniques for achieving *Accent and Anticipation,* convincing *Lip Synchronization,* and body movements, as well as brief insights into the duties of such specialized personnel as the *Inbetweener,* the *Inker,* and the *Opaquer.* Accompanying these are sections dealing with the creation of cartoon characters, the animation board, the animation camera, and the optical printer. A functional glossary of terms including their generally accepted abbreviations is also efficiently contrived.

The high point of this work however is achieved in a scene-by-scene analysis of a one minute commercial that

was originally produced by the author for the General Electric Company. Here we clearly see "how all the elements of an animated film are brought together to form a unified whole."

To the novice this work can offer many old ideas about a new field, while to the expert it may provide some new ideas about an old field. In either case though it should prove to be a welcome "cel-mate" to anyone working in this area of film production.

Formerly with the St. Louis County Schools, Mr. Henry is finishing his doctorate at Indiana University.

Scholastic Teacher . . . *1961 National Film and Filmstrips Awards*

MYSTERY OF TIME

This award-winning FILM gives one a glimpse of what is beyond our own space-time continuum. High-speed and time-lapse cameras help free the viewer from the prison house of time. Yardsticks shorten, clocks and human heartbeats slow down as the laboratory is "accelerated" to nearly the speed of light in a unique audio-visual presentation of the elements of the theory of relativity.

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Schools, language labs and libraries use Soundcraft Tape Indx to quickly pinpoint any tape selection on the tape reels and to clearly index their tape libraries. It's this easy: You put numbered, colored flags right on the base side of the tape itself. These flags remain visible at all times, even when the tape is completely wound. Then put your notations on the index label corresponding in color and number to the flag. When you want to find your selection, look it up in the index. Run your recorder at fast wind to the flag with that number. You now have the exact selection you want! Quickest, most convenient tape indexing system invented —Soundcraft Tape Indx. R-147

Tape Indx Pack:
30 flags and 30 labels, **$1.00**

Library Pack:
360 Mylar Flags, 360 Selection labels, 60 box labels, **$9.00**

Write for free Tape Indx Catalog.

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"A Pithy Survey"

by Elliott Rabner

THE *Nation's Schools*, a periodical devoted to better school administration, has issued as part of its administration studies a pithy survey of the audiovisual media.

In his introductory article Professor Wittich of the University of Wisconsin reminds us of the dangerous lag between communication methods in the classroom and the means employed in general society. He further suggests that "teaching and learning in our contemporary classrooms must be reexamined in the objective way in which administrators have learned to tackle other problems—through *research* and through *action* on the basis of research."

"Audio-Visual Tools of Learning" in the *Nation's Schools* 67: 63-108; February 1961.

The 48-page administrative study of the new media includes: (1) A vivid picture of the AV tools of instruction provided by industry and promises of things to come. (2) An authoritative appraisal of the language lab. (3) Significant facts about the teaching machine and programmed instructional materials. (4) The verdict of a score of outstanding school administrators concerning the practical values of television in the classroom. (5) Emphasis upon the growing importance of local production. (6) A review and analysis of research made possible by NDEA. (7) The fascinating story of pioneer audiovisual research by Thomas A. Edison. (8) Proposals for schoolhouse design to facilitate use of the new media. (9) The administrator's responsibility for effective utilization of AV technics and facilities.

Professor Elton Hocking of Purdue suggests with regard to the purchase of language lab equipment (but applicable to all equipment) that "there should be a clear understanding about ends and means. Administration and teachers should agree on the financial, operational, and pedagogical planning." Hocking also recommends familiarity with the CCSSO *Purchase Guide* and its 1961 Supplement. The September 1959 *AVI* is also cited.

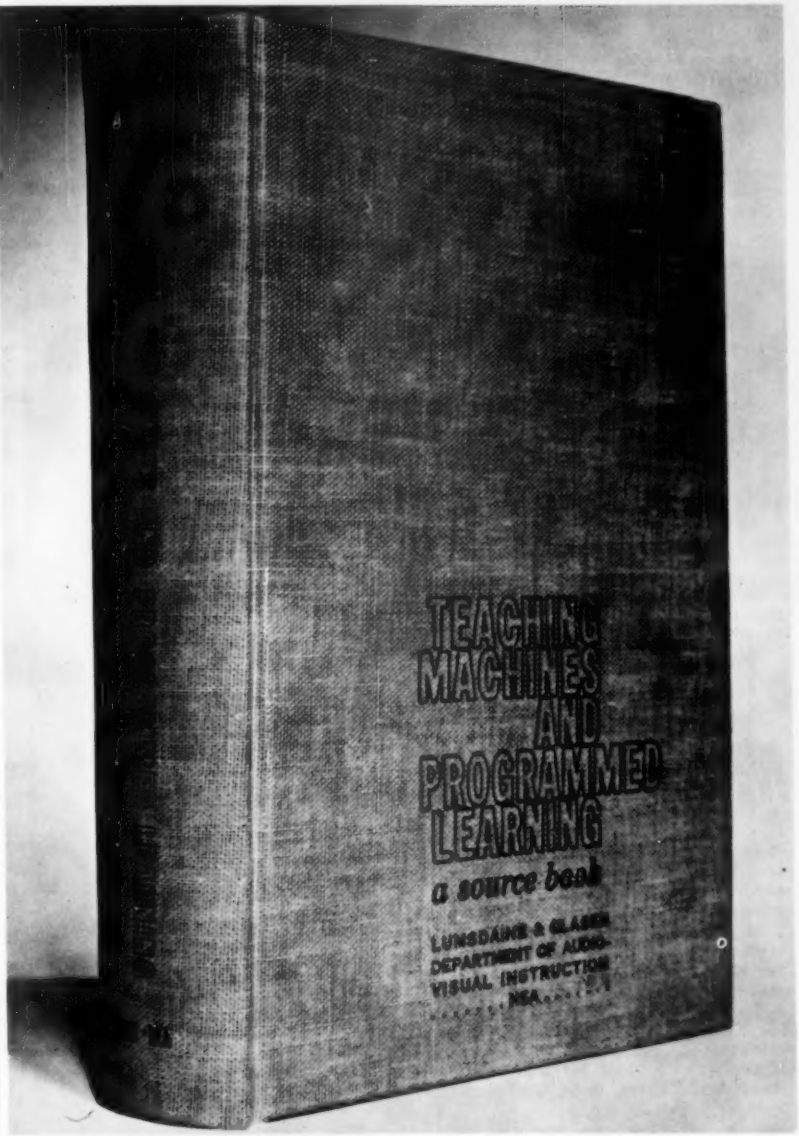
Anna L. Hyer asks the administrator a series of questions which tend to place him in a position of self-analysis: Is the administrator aware of and open-minded about new technological developments? Is sufficient time made available for the AV director and building coordinators to perform their functions? How adequate is the financial support for the instructional materials program? For each question asked, Miss Hyer offers concise statements which should prove helpful to the administrator.

For those interested in the early prototypes of our AV machines, the article on "Edison" by Otis A. Crosby of the Detroit Public Schools will prove rewarding. The clairvoyance of the inventor with regard to his instruments as a service to "audio education" is presented through an extract from the patent application for his talking machine. Illustrations of materials in the Dearborn area serve to illuminate the text.

C. Walter Stone, director of the educational media branch, U.S. Office of Education, notes that under Title VII of NDEA, $8 million has been spent

(*See the next page*)

Elliott Rabner, a Newark school librarian, is a regular contributor to the book review section.



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Model CD-6L

MRI | TRW

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This modern, functional unit (illustrated) gives you the space you need for as many as 6 tape reel or automatic magazine playback/recorders, and/or phonographs. Plenty of room for storing tapes, headsets, other accessories . . . all out of sight . . . out of the way! Sliding formica tops instantly add extra wide, useful desk area.

Besides offering *the world's most complete line of quality, easy-to-use equipment*, MRI/TRW maintains a continuing program of vital educational services. Tested teaching techniques, seminars and consultations are among the many ways MRI/TRW helps assure maximum effectiveness, maximum utilization of equipment.

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or obligated to carry out research and dissemination activities. Of the 138 research grants awarded, he feels that too many are still concerned with "proving things we already know." He details the weaknesses in many proposed projects and suggests areas of "needed" research: More study of teaching situations; more group thinking; more study of higher thought processes. The problems faced by the U.S. Office of Education in the dissemination of information will appear quite similar to those faced at the grass-root level. Dr. Stone writes that while there is little agreement on a national policy, "a compilation of a national guide to instructional materials will probably begin during 1961." He adds that a schedule of basic studies and surveys is now being rounded out which should "provide us with a full cross-sectional view of the roles that new media have assumed in American education and suggests worthwhile and new approaches for future use of these media."

Reprints of the 48-page study are available at 35 cents each in quantities of less than 200 and 30 cents each if more than 200 are ordered.

NOW IN THOUSANDS OF CLASSROOMS!

BEST . . . because it has passed the classroom test

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STUDENT CENTERED . . . requires minimum assistance. Students master its use in minutes.

EASY ON BUDGET* . . . Actual classroom experience over a 5-year period shows that costs run as low as 37c per pupil.

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AUDIO VISUAL RESEARCH

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SIMPLE! EFFECTIVE! DURABLE!

Have You Seen These?

Audio - Graphic Communication, prepared by William Scholz for General Electric, advocates the use of audio and graphic techniques for employee communication. It describes the use of still projectors, slides and filmstrips, motion pictures, charts, graphs, chalkboards, flannelboards, exhibits, closed-circuit TV, etc. The charts on screen size and comparison of audio-visual media and the lettering guide appear especially well constructed. Available from General Electric, Relations Services, 570 Lexington Avenue, New York 22.

Reflections & Projections is a well illustrated report of the Frontiers of Science Foundation of Oklahoma, Inc. Available with an accompanying LP recording of the Robert Lewis Shayon radio program, "Everybody's Mountain." Write to the College of Education, University of Oklahoma, Norman.

Report on the National Defense Education Act is a summary of its progress for the fiscal year ending June 30, 1959. Available for 45 cents from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

Personal Notes

TED SHERBURNE, formerly with the University of California, has moved permanently to Washington, D. C. where he will be associated with the American Association for the Advancement of Science. Commenting on his new position as director of studies in the public understanding of science, he said: "It is the most 'multimedia' endeavor I have ever been engaged in."

DON DAVIES, associate professor of education and director of student teaching at the University of Minnesota, has been named executive secretary of the National Commission on Teacher Education and Professional Standards, NEA, effective August 20. He replaces T. M. STINNETT who has headed TEPS for the past 10 years. Dr. Stinnett who assumed the NEA post of assistant secretary for Professional Development and Welfare last year will carry on in this assignment.

IRVING SPIGLE, AV director at the University of North Dakota, has accepted the position as director of instructional materials and research for School District 163, Park Forest, Illinois. Among his duties will be organizing a materials center, research projects, and a film library. He will also be in charge of ETV activities. He assumes his new position June 1.

DALE GIBSON, formerly of the Muskegon (Michigan) County Board of Education, is now coordinator at Bakersfield Center, Fresno State College, Bakersfield, California.

DAVI President JIM FINN was among the speakers at the NEA Southwest Regional Conference on Instruction April 16-19 in Tucson. Appearing twice on the program, his topics were "Teaching, Learning and Technological Developments," and "Modern Technology and the Teaching Process." The conference covered a wide range of topics including curriculum, international understanding, team-teaching, multidisciplinary approach, academically talented, and so on.

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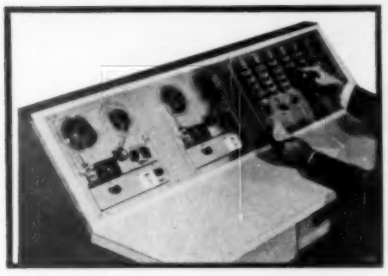

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- Designed for maximum teacher/student productivity.
- Every desired variety of hum-free clear toned communication.
- Adaptable components for permanent or portable installations.
- Maximum ease of operation, "tamper-proof" durability.

Design and functions of the Console assure the teacher's convenience, comfort and positive fingertip control over each classroom situation.

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Seconds to Set Up!

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Previewer Sr.

Fastest, most convenient method yet–for desktop previewing of 35mm filmstrips. Large 7" x 9" screen also provides ideal direct viewing for individuals or small groups and for home study or use as filmstrip "textbook." Threads itself instantly. Focuses with single knob.

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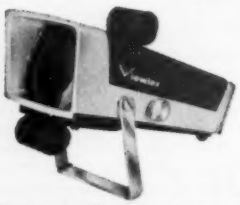

Previewer Jr.

For On-The-Spot hand-held or desk-top previewing of filmstrip. Operates on A.C. current or batteries. Simple to thread; sprocket advance. Extra-brilliant optical screen.

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Richard Smith Named First Rachford Scholar

Mr. Smith

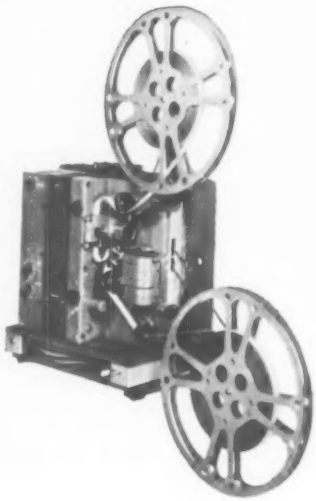
RICHARD WILLIAM SMITH of Detroit has been awarded the first Helen Rachford Memorial Scholarship of $500, according to Margaret Divizia, chairman of the DAVI Memorial Scholarship Committee.

Mr. Smith was selected by the Committee last spring and plans to use the scholarship for graduate work this summer at the University of Michigan where he is working on a Ph.D. in education. In 1957 he received his master's degree in education from Pennsylvania State University where he had been instructor in the instructional materials division of the department of education from 1955 to 1956. Since 1958 he has been a high-school teacher of English and social studies in Ferndale, Michigan, where he also coaches the varsity swimming team.

"I became acquainted with the AV field while still a student in high school," says Smith who was a member of the first projectionist club organized at Schenly High School in Pittsburgh. After finishing high school he spent three years in the U.S. Navy as a motion picture specialist.

Again this spring the DAVI Memorial Scholarship Committee will award a $500 scholarship (see April AVI, page 160). Applications, available from DAVI in Washington, should be sent at once to Mrs. Margaret Divizia, Audiovisual Section, Los Angeles Board of Education, Sentous Center, 1203 West Pico Blvd., Los Angeles 15.

Good reasons for RCA projector popularity!



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- Built-in lubrication!
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- Nylon film pressure shoe—lasts 2 to 3 times longer!
- Superior sound reproduction!
- Longer operating life; minimum maintenance!

**Rigid endurance standards have been set for RCA "LIFE-TESTED" Projectors. Individual components as well as finished projectors are subjected to continuous testing to evaluate the durability and efficiency of all operating parts. "LIFE-TESTED" at RCA means better, more reliable performance from RCA Projectors.*

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The Most Trusted Name in Electronics
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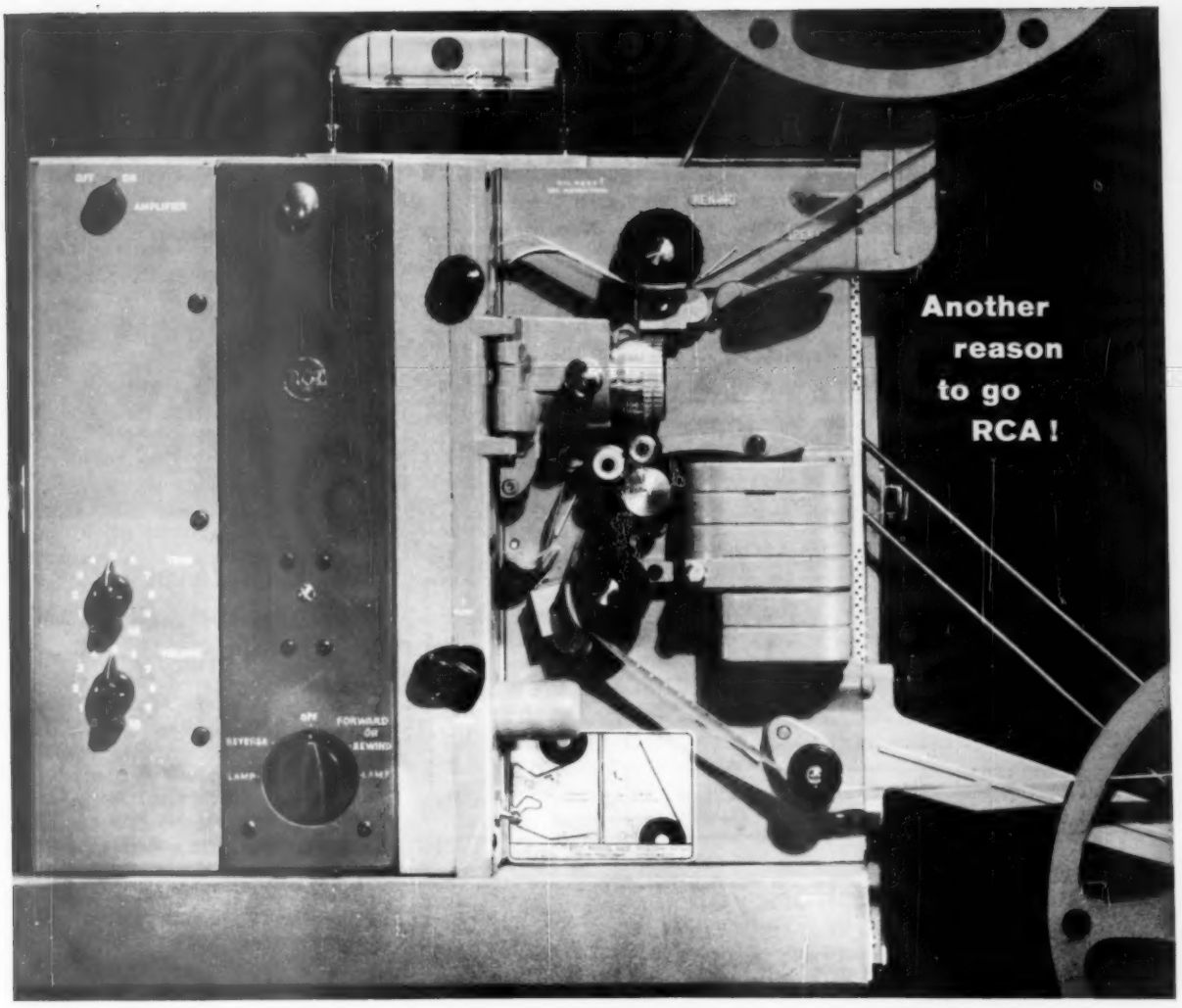

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Here you see the "E" Series RCA "Life-Tested" 16mm Projector. Doesn't look much different, does it? That's because RCA believes in improving performance, not changing appearance. Simplicity, convenience and ease of operation have always been the criteria which determine whether changes will be made. And in the "E" Series numerous changes have been made which do improve performance.

Here are some examples of what we mean. New nylon film pressure shoe treats film extra gently, operates more quietly, lasts two to three times longer. New claw design accommodates new or old film with equal facility. New single switch reverse operation is quick, quiet and safe. New one-piece intermittent cam and gear replaces conventional three-piece assembly, reducing maintenance. New single switch action assures more convenient operation.

Changes such as these represent RCA's continuing effort to improve the performance and dependability of its projectors. No, we haven't changed the basic design, and with good reason. That's because this design affords you what is—and always has been—*the easiest threading film path of any projector on the market.* You'll be glad we kept it that way!

Be sure you consider the new features and the familiar ones . . . when your RCA Audio-Visual Dealer demonstrates these new "E" Series Projectors. He's in your Classified Directory under "Motion Picture Equipment and Supplies." Call soon and see for yourself.

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Dr. Hyer Receives Award from Minnesota Group

SHOWN ABOVE is Anna L. Hyer, DAVI executive secretary, as she accepts the AVCAM Presidential citation from Thomas Tripit, out-going president of AVCAM. The award, which cites Dr. Hyer for "outstanding contributions to the field of audiovisual education" and "qualities of service, fidelity, and leadership" also confers upon the recipient a lifetime honorary membership in the Audiovisual Coordinators Association of Minnesota.

The occasion for the presentation was the AVCAM dinner and business meeting during the Sixteenth Annual Audiovisual Institute sponsored April 6-7 by the University of Minnesota at its Center for Continuation Study. At the same meeting Dr. Hyer addressed AVCAM members on the topic, "Audiovisual Growth Rings," following installation of their new president, Robert Bauman, director of visual education at Macalester College.

Dr. Hyer also addressed the opening session of the two-day institute which gave broad emphasis to teaching machines and programmed instruction. On the program were Norman Crowder, director of training for Western Design Manufacturing Company who spoke on "Research on Programmed Learning and Techniques"; Ned A. Flanders, associate professor of education, University of Minnesota, whose topic was "Programmed Learning and Utilization of Teaching Machines"; B. Y. Yaeger, research engineer, Minneapolis-Honeywell Regulator Company, who ad-

dressed himself to "The Human Factor in Teaching Machines"; and Robert Beck, professor of education, University of Minnesota, who discussed "Educational Philosophy for Instructional Programming."

Presiding over classroom demonstrations of audiovisual materials and how-to-do-it sessions were M. I. Smith and Wesley Grabow. Neville Pearson conducted a session on "When Are Films Obsolete?" with Ervin Nelsen of Coronet, Godfrey Elliott of McGraw-Hill, and Owen Johnson of EBF as panel members. Willard Philipson of the University AV staff officiated at the session on language laboratories with Emma Birkmaier, professor at the University High School, and Sister Chiara, director of the language center at the College of St. Teresa at Winona, as participants.

Alexander F. Victor

ALEXANDER F. VICTOR, the 82-year-old founder of the Victor Animatograph Company died March 29 at Carmel, California. One of the AV industry's earliest and most colorful pioneers, Mr. Victor had been a generous donor to the DAVI Archives. A friend of Thomas Edison, he was credited with more than 300 inventions, most of which involved motion picture equipment and many of which were too technical to have much meaning for the man on the street. They included the 16mm sound-on-film projector and the first continuous reduction printer which provided a relatively simple means of making 16mm prints from 35mm films. He also invented the first electric washing machine.

Born and educated in Sweden, Mr. Alexander first came to the United States in 1901 as a stage magician, billed as "The Great Alexander." Though twice married, Mr. Victor leaves no known survivors, his only child having died in childhood.

Television Course

TWO-HUNDRED-SIXTY New York City school teachers are finishing a comprehensive 15-session course, "Television in Today's World." The course was developed cooperatively by the New York City Board of Education's Division of Personnel and Teacher Training, and the Television Information Office. Its purpose is to acquaint teachers with the functioning of television as a communication form, art form, industry, and social institution, as well as to help them utilize television in the classroom.

"Teddy bear, teddy bear, go upstairs," trilled little Jenny gaily.

"Gracious, children! Playing! Do you not care a penny for our production schedule?" Thomas Sturtevant commented gruffly. "Audio-visual departments all over the nation are awaiting with anticipation, this, our latest Churchill-Wexler film."

"Teddy bear, teddy bear, say your prayers," trilled little Jenny gaily.

Steel Industry Filmstrip

Money at Work in the Steel Industry, a color filmstrip designed for use with high school students, deals with the role of money in our industrial economy. This evaluation comes from Galen Jones, director of the Council for Advancement of Secondary Education, NEA: "Both the frames and questions or comments on them are substantive and carefully done. The economics taught are sound and realistic. The teaching suggestions are pertinent. The comments to the right of each frame should prove helpful and enhance the teacher's confidence in dealing with a difficult subject. The supplementary materials and aids are chosen discerningly."

. . .

How Strong Is Your School?, a 16-page brochure explaining Titles III and V-A, includes suggestions for achieving "stronger schools." Available from the Superintendent of Documents. U. S. Government Printing Office, Washington 25, D. C., 10 cents.

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TOP MEMBER-GETTERS with 15 or more new DAVI members to their credit are:

KATHRYN CARLIN, supervisor of audiovisual materials, Dade County Public Schools, Miami, Florida

J. K. EAST, supervisor of audiovisual education, South Carolina State Department of Education

CHARLES E. FOSTER, materials consultant, Lee County Schools, Fort Myers, Florida

S. C. HAWKINS, assistant director, Teacher Education and Certification, South Carolina State Department of Education

HERBERT JENSEN, audiovisual director, Greenwich, Connecticut

GLADYS ROHRBOUGH, executive secretary, Audiovisual Education Association of California

NETTIE SHAW, audiovisual supervisor, Carthage, Texas

PAULINE SMITH, classroom teacher, College Park, Georgia

On the "10 or more" honor roll are:

DONNA O. ASH, supervisor of audiovisual instruction, Alpine School District, American Fork, Utah

DOROTHY ANDERSEN, audiovisual consultant, Salt Lake City Schools

A. H. PEELER, principal, J. C. Price School, Greensboro, North Carolina

L. G. RACKLEY, director, Audiovisual Center, South Carolina State College

ARTHUR REARDON, director, Audiovisual Service, University of Maine

RICHARD L. SANNER, coordinator, Audiovisual Activities, University of Hawaii

The national office is aware that membership gains are often the result of team work. Donna Ash, one of the top member-getters in Utah, comments: "I feel that credit should go to President Evan Memmott and organized crew."

From California, Gladys Rohrbough writes: "In California we have a membership team. Ron Hunt, DAVI chairman for Area Two, Henry McCarty, Myer Crumb and I wage a continual campaign. Clarence Spencer, our president, lends his support with editorials in the newsletter. Ron Hunt urges everyone to mention AVEAC-DAVI in all conversations, lists the initials AVEAC-DAVI on as many publications as possible and continually asks, 'Are you a member of AVEAC-DAVI?' Henry McCarty designs membership dodgers and publicity; and when facsimile membership

applications arrive, I know that Myer Crumb has been waging a campaign of his own. My contribution is the 'label' method. In answer to my requests for addressed labels I have received many names of people who should be interested in AV and to whom I send materials, extra newsletters and anything that I have. I am honored that you requested my picture for the magazine but I am sure you will agree that our success is due to teamwork and that no one person should be cited."

Honored at Miami

Membership efforts were rewarded at the Miami Convention April 27 when three affiliates, three states and three regions were awarded certificates for top performance.

Affiliates recognized for having the highest percentage of membership in the national organization were:

Canada, 100 percent
Puerto Rico, 80 percent
Washington State, 74 percent

[Dr. Hyer estimates that if all members of state organizations were to join DAVI, the national membership would triple. This may give some indication of membership emphasis for 1961-62.]

The three states showing largest membership gains since October 1 were South Carolina, 73 members (S. C. Hawkins, state chairman); California, 53 members (Myer Crumb and Henry McCarty, state chairmen); and Florida, 51 members (Charles Foster, state chairman).

Regions honored for making the best records since October 1 were Area Nine, 147 new members (J. K. East, chairman); Area Seven, 128 members (Eugene Oxhandler, chairman); and Area Two, 91 members (Ronald L. Hunt, chairman).

McCarty

Crumb

Hunt

Oxhandler

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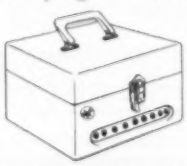

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SAVES PROJECT TO UNDERTAKE LONG-AWAITED SURVEY: NOEL AT HELM

Made during the "kick-off" conference at NEA Headquarters in April, the photo above shows Seerly Reid, U.S. Office of Education, whose previous experience in state audiovisual surveys will be of inestimable value to SAVES director, Francis Noel, center. At right is Sidney Eboch, San Jose State College, who will work with Dr. Noel as project manager.

A MUCH NEEDED and long-awaited survey of state audiovisual programs was initiated at a meeting at NEA headquarters in Washington April 8. The project, which will be known as SAVES (States Audiovisual Education Study) is financed by the Educational Media Branch of the U.S. Office of Education under a Title VII contract with the University of Southern California.

Francis Noel, formerly of the California State Department of Education, is project director, assisted by Sidney C. Eboch of San Jose State College, as project manager.

As outlined by Dr. Noel at the Washington meeting, the survey emerged as a broadly conceived project which will draw on representatives from many segments of the education field in formulating the survey instrument. (See listing next page.)

The objective of the study as defined at the April meeting is to determine how state departments of education exert leadership in the new media field.

Expected to be completed for publication by June 1962, the study is planned in these six stages:

- The kick-off conference in April which was designed to come up with basic specifications for the survey instrument.
- Formulation of the survey instrument. From April to June, Dr. Noel and Mr. Eboch will carry on this phase, conferring with the U.S. Office of Education and with the educational groups represented at the April meeting. A conference with ACSSAVO at Miami was also planned. The final instrument (drawn up so that it can be adapted to machine processing) will be published by the U.S. Office of Education and distributed to the 50 states.

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• Collection of data, June to October 1961. In addition to the questionnaires, a SAVES representative will personally confer with appropriate state officials.

• Research of the literature. A fourth phase of the survey to be initiated early in the timetable will involve a researcher who will dig up information on audiovisual programs from state department documents, publications, codes, etc., on file at the U.S. Office of Education. This phase of the study will serve as a check on the questionnaire and also as a valuable source of information upon which other phases can draw.

• Processing the questionnaire, November 1961 to June 1962.

• Report submitted to the U.S. Office for publication, June 1962.

An important aftermath of the SAVES survey will be a review of the findings by the Study Commission of the Council of Chief State School Officers. Consisting of one representative of each Chief State School Officer, the Study Commission is set up to deliberate various educational problems with the view to developing guidelines for CCSSO action. Since the resulting policy statement is in most cases a document which sets goals and recommends practices, action by the Study Commission is expected to convert the SAVES findings into an instrument for improvement of audiovisual programs in the states.

Among participants at the initiating conference were: Paul M. Allen, American Association of Colleges for Teacher Education; Betty Bull, National Congress of Parents and Teachers; Lee W. Cochran, State University of Iowa; Guy A. Curry Jr., National Commission on Teacher Education and Professional Standards; Edgar Fuller, National Council of Chief State School Officers; George Gerbner, University of Illinois; William G. Harley, National Association of Educational Broadcasters; Anna L. Hyer, DAVI; P. Kenneth Komoski, Center for Programed Instruction; Barry Morris, Florida State Department of Education; Paul C. Reed, Rochester (New York) City Schools; Harry Skelly, California State Department of Education; Robert C. Snider, DAVI; W. D. R. Stovall, Association of Chief State School Audiovisual Officers; Ernest Tiemann, University of Texas; Arnold C. Tjomsland, National Council on Schoolhouse Construction; Don White, National Audiovisual Association; Harold Wigren, DAVI; and Paul Witt, Teachers College, Columbia University.

Representing the U.S. Office of Education were Seerley Reid and Seth Spaulding, Educational Media Branch; and Fred F. Beach, School Administration Branch. Dr. Reid, it will be recalled, conducted a pilot AV survey for the U.S. Office in 1957.

Francis Noel and Sidney Eboch represented the project.

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Guidebooks

Introductory and Publications Photography is a combination guidebook and laboratory manual intended for use in connection with a class in black-and-white photography at the high school or college level. (Kenilworth Press, Glen Ellyn, Illinois, 1959.)

Educators Guide to Free Films, Educators Progress Service, Randolph, Wis., 20th annual edition, 1960. 639 p., $9.

Educators Guide to Free Tapes, Scripts, and Transcriptions. Educators Progress Service, seventh annual edition, 1961. 203 p., $5.75.

Educators Guide to Free Science Materials, Educators Progress Service, first edition, 1960. 298 p., $6.25.

Who Are the Real Culprits

Editorial/Alice Finstad

A SUBSTANTIAL MAJORITY of the country's population —seven out of ten people—have come out unequivocally for federal aid to education. Opposition remains, however, and it is discouraging to note that in part it stems from teachers themselves.

John F. Kraft, pollster for National Newspaper Syndicate who released the above figures on April 8, also quotes a public-school teacher as saying:

> I am violently opposed to any aid from the federal government. They say the state will have final say-so about how the money is spent, but I don't believe it. Besides, I don't want a bunch of politicians down at the state capitol dictating to me what I have to teach. I have my own system and the parents approve. I teach history in terms of our own community. *I do wish, though, that the city had been able to get the bond issue passed.* (Italics added.) Our library needs at least 5000 new books.

Another teacher expressed himself thus:

> I don't know where all the kids come from. Our enrollment has almost doubled in three years. We need help and we need it fast. But federal aid bothers me because I don't think that's the way to do it. I'd rather see it done by the state or even locally, because by the time a dollar gets to Washington and back it's worth only 20 cents. We need the whole dollar. Every penny.

That this kind of thinking exists among public school personnel we can verify from personal experience. Last month we had a visit from a school librarian on the West Coast whose community seems to us a living argument for federal aid to education. A railroad town in a non-farming section, its taxable property is limited. The school budget for next year is definitely inadequate and unfortunately the latest bond issue failed to pass. (So many retired couples living in the community.) The superintendent prays for a federal support bill to safeguard the excellent program he and his staff have worked hard to build up. Not so our librarian. Even as she sees her book collection jeopardized for lack of funds she prefers hand wringing to federal assistance. (So many forms to fill out, and once the government gets in. . .)

It's easy for you and I to feel resentful over this kind of shortsightedness. We know better and we have facts to back us up. We can quote figures from the Internal Revenue Service to show that the federal government is the most efficient of tax collectors. It costs on the average of 44 cents to collect $100 at the federal level whereas state taxes are estimated at $1 per $100 and local taxes at from $5 to $10 per $100.

We wonder why others can't see that the teacher who worries erroneously about losing 80 cents of his tax dollar is the victim of a myth just like the one who fears federal control. Why can't others recognize that, as a pressure group, the federal government is a poor example when compared with self-appointed vigilante groups, would-be book burners, super-patriots, or business interests whose sponsored materials are an ideal instrument for infiltration. (The cry of "industry control" is seldom raised.)

Moreover, the education bill before Congress has safeguards written into it; safeguards which will be part of the law. All the bill proposes to do is to make the federal government the channel through which tax funds are apportioned to states for educational needs. This has nothing to do with a "national curriculum" which is what those who cry "federal control" are really talking about. The national curriculum may come, but not through financial support from the federal government. If it comes, it will be through other forces (not necessarily governmental) which are a part of modern life—urbanization, the tendency to bigness, centralization, the electronics boom, mass media in education, and so on. In fact, it can be argued that schools on a sound financial base will be in a much better position to resist encroachments of all kinds.

Benighted as the minority opposition may seem to us, we must however be honest. We must ask ourselves who the real culprits are. Are they the retired couple who can no longer relate educational needs to their own or the national well-being? Is it the teacher or librarian who passionately wants the best education for the children she sees and works with every day but, stymied by myth and prejudice, cannot accept the most logical avenue of support?

Or is it ourselves? We who take pride in our ability to recognize the changes in our society and to relate solution of modern-day problems to these changes. We who have the facts on our side and a powerful educational organization to back us up in our fight for better schools. We who as teachers, writers, audiovisualists, and in some instances, persons of standing in the community, have all the tools at our command to make ourselves heard both at home and in the halls of Congress—yet who for some reason fail to expend that extra effort towards putting a firm financial base under our country's schools.

Can we honestly claim to care more for the education of our children than the vocal minority whose views we condemn, but who at least care enough for their beliefs to make them prevail?

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